Digital Health

Plus Frontiers Health Highlights

Powered by digital

Optimised clinical research through decentralised trial

Pushing the right buttons for transformative digital health

pharmaphorum deepdive

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Deep Dive: Digital Health 2021

There is no doubt that the COVID-19 pandemic has accelerated the adoption of digital health.

With physical access to patients and labs limited, healthcare providers have been forced to get creative with digital tools to ensure a consistent level of care over the past two years. Granted, there have been some teething problems, but overall, the industry has successfully developed proof-of-concept that digital tools can be highly beneficial for both patients and practitioners.

The question now is: how do we continue this momentum beyond the bubble of the pandemic?

As all of this issue's contributors highlight, digital transformation is impacting every corner of the healthcare industry. This was the hot topic for industry experts at the 2021 Frontiers Health conference in Milan, where experts from across the industry gathered to give their insights into the future of digital health. In this edition of Deep Dive we bring you some of the biggest talking points from the event, including the potential of hybrid healthcare models and how digital can make medicine more human.

While we can't say for certain what a digitally powered healthcare system will look like, what is certain is that, amid a flurry of investment and innovation, it is undoubtedly an exciting time to be in digital health.

Eloise
Eloise McLennan – editor, Deep Dive

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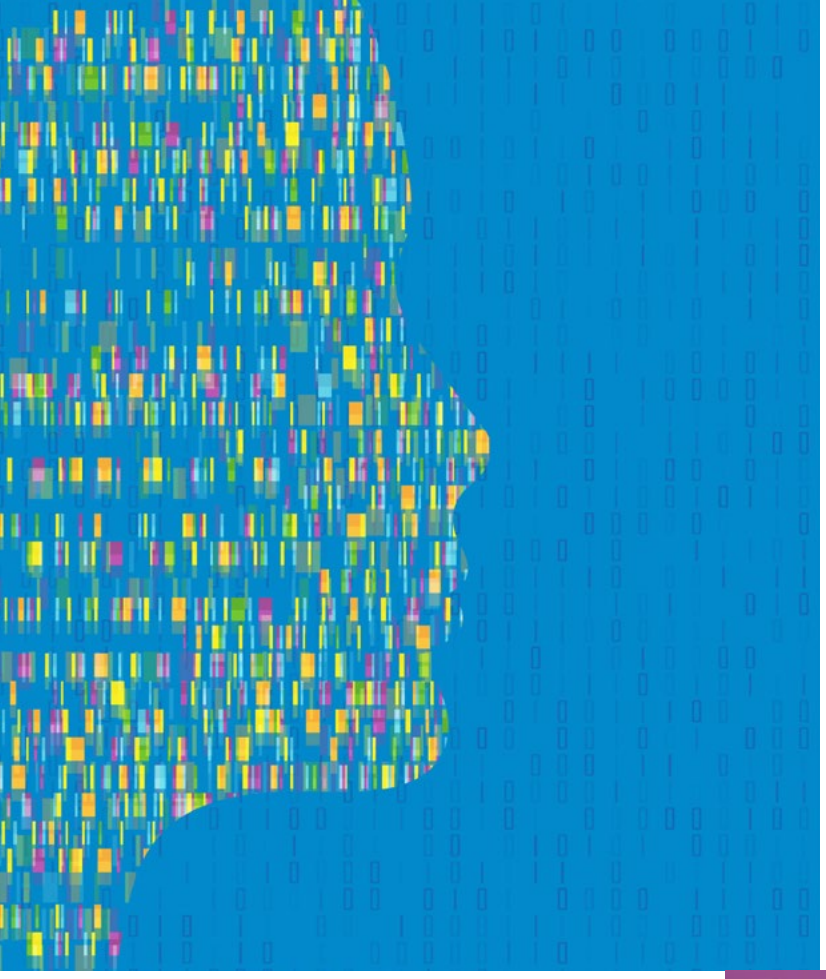


Digital health: making medicine more human

Covid-19 has lit a fire under the medical industry, driving them to re-evaluate and incorporate digital engagement models. Now, healthcare companies have a unique opportunity to continue this momentum beyond the pandemic bubble as Healthware Group CEO **Roberto Ascione** tells **Dr Paul Tunnah** at the 2021 Frontiers Health conference in Milan.

Digital health has undergone a dramatic transformation over the past few years. Driven by necessity, the Covid-19 pandemic has forced a serious conversation around how we can use these digital tools to improve the overall workings of medical care.

For Healthware Group CEO Roberto Ascione, this transition has been a long time coming. Born into a family of doctors, his formative years were shaped by two core passions – medicine and technology.

Nowadays, combining these two disciplines seems like a natural progression, but, at the time, they were seen as entirely separate fields. Unfazed by this perception, Ascione began to envision a future where medicine and technology not only functioned alongside each other but collided into a system that could vastly improve healthcare, not just for his patients but for all patients.

Now, with decades of experience as a thought leader in the digital health space, Ascione has released his first non-fiction book, The Future of Health. It is a crystallisation of his understanding of digital health both past and present, as well as how this asset could help create a proactive approach to healthcare.

"The book is about this notion of the future of health and this shift away from curing diseases, to taking care of people before we all eventually become patients," he explains.

"If I had become a doctor, my impact could have been a few thousand people," he says. "But by writing software for doctors or for medicine in general, this impact could have been much bigger."

Changing attitudes to digital health

The healthcare landscape has undergone a transformative shift since Ascione began his pursuit of technology-driven medical care. No longer a pipedream for those with a vision, digital health is now a driving force for thought leaders planning the future of healthcare.

It has not been a simple process. In the early stages of the industry, development at scale was relatively difficult as many simply didn't understand the support needed to bring products from proposal to patients.

"If you think about the level of investment to develop a new drug, nobody's surprised how much a drug cost because we know the process behind it," explains Ascione. "We are starting to realise what it takes to develop digital technologies, scientifically validate them, perfect, scale and distribute them globally."

Consequently, digital health remained a fringe element of healthcare for many years, driven predominantly by start-up pioneers in the space.

He continues, "As time passed and more technologies became available, this notion of using technology to improve human health became more real."

This slow adoption of digital tools looked set to continue, with larger companies steadily coming around to the vision of a distant digital future.

Then Covid-19 hit. And that future wasn't so distant anymore.

Entering the hybrid era of healthcare

There is no doubt that Covid-19 has been a unique learning opportunity for healthcare services and digital health companies. Unlike other industries, healthcare did not have the luxury of being cautious. It was a leap of faith for many, but one that has given clients a new wealth of tools that can be used to help improve the way that medical practices are approached.

Two years on, general awareness of digital health is greater than ever. With real-world success acting as a proof-of-concept for digital health, attention has turned to the role these systems could play once Covid-19 restrictions have eased.

"Now that we have proven that we can do things in a much more convenient way, there's no reason why we should go back," Ascione explains. "I don't think many people will be happy to travel a couple of days, maybe with a relative, and take two days off at work for a 20-minute consultation that can be done elegantly in the comfort of your home."

Instead, he foresees an engagement model that combines the most efficient and convenient elements from the digital and physical systems into a hybrid format.

"We already have signs that this will stick," he says, "If you look at telemedicine, it's between 30% and 40%, which is an enormous shift from the zero percent before the pandemic.

"There are many use cases where virtual will add value to the end-user. If you add this value, you can't remove that convenience from the equation and hope that people will go back to before."

Beyond the pandemic bubble

Digital health technologies, once buzzwords, now form one of the most vital pillars of healthcare. But that doesn't mean that every stakeholder understands what they are or how to use them. In fact, complex digital systems can be alienating to the very people who could benefit from implementing them.

For Ascione, the issue of education will be a driving force for digital healthcare moving forward. However, he notes, awareness is only one piece of the puzzle. If the momentum of the past two years is to continue, stakeholders must also address the issues of funding and access.

"Some estimate that the global healthcare is a $10tn industry," says Ascione. "It takes serious funding to scale these companies from smaller, local, proofs-of-concept into real players that are able to deliver these new opportunities and modalities on a global scale."

One significant challenge he highlights is that healthcare extends across a myriad of environments with varying levels of infrastructure that may not be able to accommodate rapid technological innovation. This means that even the best developments may not reach those they are designed to help.

"We are starting to realise what it takes to develop digital technologies, scientifically validate them, perfect, scale, distribute globally," says Ascione. "You can have a brilliant solution that really solves an unmet need and is scientifically sound. But, if you don't create that infrastructure for this to be accessible by patients in the various systems, the most important part is missing."

He is hopeful that the level of investment will continue to grow with the awareness bought about by Covid-19. Encouraging a thorough dialogue with clients at all levels, from government bodies and scientific societies to potential investors and industry thought leaders, may also help to drive real change in the industry beyond the investment bubble of 2020/21.

Making healthcare more human

While some may view the pandemic investment boom to exist in a bubble – set to pop once Covid-19 restrictions are no more, for Ascione, this is just the beginning. Healthcare services will either have to adapt to this new normal or risk being left behind by the competition.

"This is something that is here to stay, and the level of funding is just becoming consistent for the magnitude of the challenge," he says.

Ultimately, the pandemic may be the catalyst needed to re-evaluate the way that medical treatment is approached, reducing the time clients spend away from patient care and making healthcare more human.

"We are just in the beginning of phase two," he says, smiling. "It's a great time to be in this industry, for sure."

About the interviewee

Roberto is a pioneer in digital health and a recognised thought leader, people-inspiring founder, serial entrepreneur and global manager.

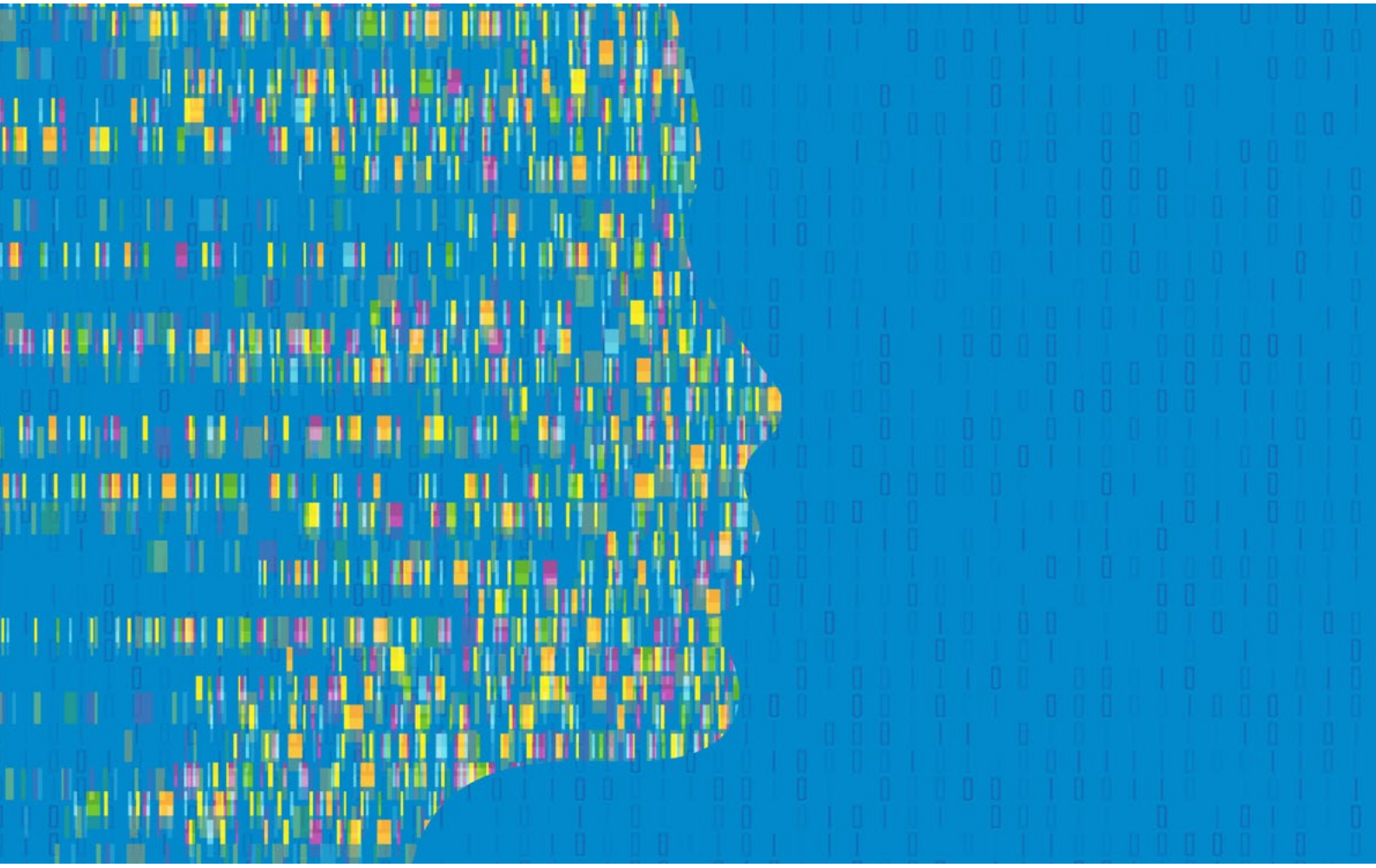
Trained as a medical doctor and in marketing communications, his passion for medicine, computer science and human-technology interactions have led to his lifelong commitment and dedication to the advancement and spreading of digital healthcare, he holds a strong belief that digital innovations and technology will be the most impactful drivers of change in healthcare.

Roberto is currently CEO at Healthware Group, a global health innovation and technology leader providing transformational advisory and technology services for commercial, medical, and R&D operations of life-sciences and digital health companies, combined with design and development of owned digital medicines and digital therapeutics products.

Proprietary software platforms, specialised media and educational assets as well as a corporate venturing arm, ensure accelerated product development, close integration within the innovation ecosystem, continuous pipeline development and superior market access capabilities.

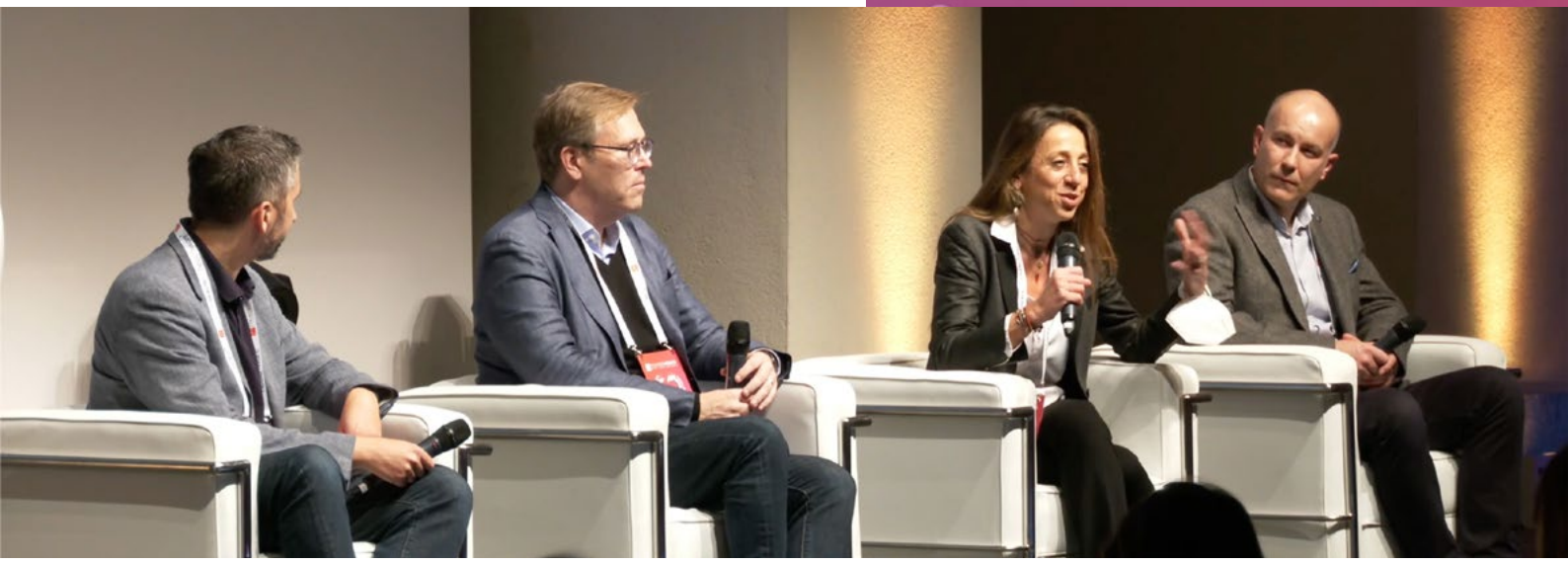
About the author

Eloise McLennan is the editor for pharmaphorum's Deep Dive magazine. She has been a journalist and editor in the healthcare field for more than five years and has worked at several leading publications in the UK.



Powered by digital: driving transformation and innovation in healthcare

Digital health is transforming the way that we approach healthcare, but how can companies make the most of this new multi-channel engagement model? Dr Paul Tunnah sits down with a panel of experts at the 2021 Frontiers Health conference to learn more about innovation opportunities in the sector.



There are very few instances where an entire industry is forced to reimagine its primary working model almost overnight. For healthcare, the arrival of Covid-19 was one such event.

Confronted with the realities of operating amid a rapidly evolving pandemic, healthcare companies had to re-evaluate the role of technology in medicine.

What followed was a flurry of activity in the digital space. Having been pushed to the side of future industry planning, smaller tech start-ups became a hot commodity for larger healthcare operations. Building on the initial progress made before the first outbreak of Covid-19, healthcare organisations were able to quickly accommodate the sudden loss of physical contact and communication.

Bolstered by a wealth of evidence that digital technology can be a valuable tool for patients and practitioners, attention has turned to the challenge of building a sustainable healthcare model beyond the bubble of Covid-19.

Speaking at the 2021 Frontiers Health conference in Milan, a panel of experts including global head of digital transformation & innovation execution at Novartis, Christian Hein, vice-president business strategy & commercial excellence for Boston Scientific EMEA Rodamni Peppa, Lundbeck vice-president digital & head of global customer engagement Danilo Pagano and Pfizer global head of digital marketing and digital health CoE John Gordon, gathered to discuss the opportunities and challenges of bringing digital health tools to the masses.

Expanding the foundations

There is no doubt that Covid-19 accelerated the adoption of technology. In the decade prior, the sector was widely viewed as a fringe, more experimental and unproven, element of healthcare. While the idea of a multi-channel engagement model was touted as the future of healthcare, there were few real-life examples that demonstrated the transformative potential this approach could have on the industry.

"Digital transformation is really the broader transformative event that can affect every single corner of the company," explains Pagano. "It is affecting the R&D, product development, supply chains, and corporate functions."

For those at the heart of the healthcare industry, digital became a lifeline. A wealth of software, digital tools and technologies bridged the communication gaps created by the pandemic, allowing researchers, patients and stakeholders to connect when face-to-face contact was suddenly impossible.

"For industries like ours that are constantly in the lab, not being able to be in the lab meant patients at risk and procedures breaking down," says Peppa. "From day one, we just had to roll up our sleeves. There's nothing better for creativity than urgency."

For the companies charged with developing vital treatments to combat the health risks associated with Covid-19, having a foundation of technology proved to be invaluable.

"A lot of the digital transformation was happening in the clinical trial space, which allowed us to really accelerate the way that we took on the vaccine development," explains Gordon. "There were many different ways that digital was applied to the way that trial was run, which allowed us to bring a product to market much quicker."

Embracing a data-driven future

One of the most important elements to emerge throughout the early stages of the pandemic was data. With labs and hospitals off-limits to patients and practitioners, information about patients and products had to be garnered from outside the clinical setting. The result was a flurry of real-world evidence that digital innovators could use to inform patient treatment decisions, clinical trial processes, and even the success of future drug research.

However, while this shift towards data-driven healthcare looked like a step in the right direction, it quickly became apparent that not all data is created equal. Without a set standard for data quality, healthcare services cannot provide consistency for patients and clients across the field.

"That fragmentation is such a strong inhibitor to anything that could have a widespread impact from a digital health solution, because you wouldn't know where to start implementing it," explains Peppa.

Addressing the issue of fragmentation will likely be a core concern for stakeholders looking to industrialise digital health post-pandemic.

"We've got to bring the same rigour that we bring to the development of drugs to the development of digital health products," says Gordon. "We have to look at interoperability and how these digital health products can be introduced into the healthcare professional workflow at scale."

Improving efficiency and efficacy is an attractive draw for companies in the healthcare space. However, finding ways to improve the value-for-money of software has proven to be a challenge.

"We know in the pharma industry how to sell pills and therapies, in the medical device industry we know how to sell devices, but how do you fit software as a service in a diagnosis-related group reimbursement system?" asks Peppa.

"New business models are always challenging," agrees Hein. "I believe that digital health solutions, especially if you embed them early in the clinical development, will become part of your drug package."

Bridging the knowledge gap

Of course, aligning the vision of a multi-channel healthcare model with the realities of implementing one at scale is an enormous challenge. One of the main issues is that the industry involves a wide array of customers, each with a varying level of technological understanding, who will ultimately come into contact with digital health services.

"The problem is always people and upskilling people," says Peppa. "It's surprising the way that AI, big data and simple digital gadgets could unleash potential within the company. We need to teach our teams to ask the right questions of where digital can help."

Specialised digital teams have become more commonplace in healthcare, which is a positive sign that the industry is set to continue developing these offerings. But, to truly harness the full potential of digital across all levels of the industry, companies will have to invest time and money into educating and upskilling employees.

Peppa continues, "You see the experts of digital starting to pop up in the shape of departments and teams, but until every single department is, capability-wise, built up to know what to ask from the experts, that's going to be a difficult curve."

While Covid-19 may have accelerated the desire to develop and adopt digital technologies, Hein is quick to highlight one significant hurdle that the broader industry must address if this progress continues – the fax machine.

"What other industry in the world is still using fax?" he asks. "It's being used for every doctor's office; for communicating covid cases on a daily basis.

"If that is your base for where you take some of your key partners in the industry, then we still have a long way to go."

Putting the human back into healthcare

There is no doubt that digital health is here to stay. But, beyond the time and money-saving appeal of technologies, one area that excites the panel members is the opportunity digital health gives providers to put patients back at the centre of healthcare.

For Hein, the clinical trial space is a notable example of this. “Speed is important, but I think the other really important element of digitising clinical trials is to make them more patient-centric,” he says. “I think it’s going to be a fundamental change in terms of how we can get more patients into this development journey, which is ultimately going to benefit all patients beyond the clinical trial space as well.”

Beyond the clinical trial space, digitising healthcare systems is also facilitating innovation in patient-specific treatment. Now, with a foundation of technology in place, the potential of personalised patient treatment is slowly becoming a reality.

“Providing personalised patient care should not be a dream anymore; it should be that specific”, says Peppa. “Technology allows us to make it specific. It’s exciting that now this is going to happen.”

While the pandemic may have accelerated the pursuit of a patient-centric, technology-driven future of healthcare, experts are under no illusion that reaching that goal will be a challenge.

“It is very hard to innovate within a big company that has certain structures and processes, and that is as regulated as the pharma industry is,” explains Hein.

What is clear, however, is that there is no returning to the pre-pandemic model.

“The pandemic has shone a light on the opportunities that digital technology offers in healthcare. We just need to use that as a foundation to move forwards,” concludes Gordon.

About the Panel

Dr. Paul Tunnah, chief content officer and managing director UK, Healthware Group (moderator)

Danilo Pagano, vice president digital & head of global customer engagement, Lundbeck

John Gordon, global head of digital marketing & digital health CoE, Pfizer

Rodamni Peppa, vice president business strategy & commercial excellence, Boston Scientific

Christian Hein, global head of digital transformation & innovation execution, Novartis

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Pushing the right buttons for transformative digital health

Digital health and technologies offer a wealth of opportunities, but digital needs to become part of a company's DNA to achieve transformation. Rodamni Peppa, Boston Scientific's vice-president for business strategy & commercial excellence for Europe, the Middle East and Africa, gives insight into a four-year digital journey with Dr Paul Tunnah at the 2021 Frontiers Health conference in Milan.

Digital transformation has long been heralded the future of health. Supercharged by COVID-19 necessity, it has become the buzz phrase that slots swiftly into any debate about the future of pharma and healthcare.

Although it features in every forward-thinking analysis and wish list, it is rare to get an insight into what that means across a company, from factory or laboratory floor to boardroom and how a company's mechanics – often established over decades of practice – can be re-tuned for a digital age.

The internal overhaul is often the missing piece in digital calibration. Boston Scientific's vice-president for business strategy & commercial excellence for Europe, the Middle East and Africa Rodamni Peppa reveals that it is not as simple as flicking a switch to light up performance. Instead, it takes strategic thinking, practical assessments, meticulous planning, engagement and hard work across a range of metrics.

"My job in the last four or five years has focused dramatically on digital; how do we bring the right messages to the right customers at the right time, and there was no better tool than digital to bring that forward," says Peppa.

"Digital transformation is anything digital that could impact the value chain of an organisation from R&D across to customer service. So, any tool, any technology that brings disruption and a different and more efficient way of doing things in any of these areas that a company operates is what I call digital transformation.

"Digital health is how you can impact healthcare, how you can treat patients better, how you can treat more patients and bring better outcomes through the use of digital means."

It's a laser-sharp focus, one that has been honed at the coalface of change where the new words of digital transformation must be put into practice.

With its heritage of innovation and leading-edge technology in creating medical devices packed with scientific elegance, it's easy to think that Boston Scientific would have a head start.

"We are making minimally invasive state-of-the-art technologies, so innovation is part of what we do every day, it's in our DNA, but digital innovation is not something that was as natural for us" observes Peppa. "We were born to make amazing technologies that bring huge impact on people's health, but we were not born with a digital native mindset. That is coming in right now within the organisation, and it's an impressive journey to see how it expands across the organisation."

Creating a digital mindset

The first digital advantages were scored in sales and marketing by deploying new routes to engage with customers, she adds, and they were soon infusing benefit across the business.

"The more you start operating in that digital mindset, the more you start opening up the possibilities of digital health," she says. "You start thinking about interacting with your customers in that digital manner – mixing that with a lot of face-to-face – and then you start looking at ways that digital can influence your products.

"Digital can influence your offerings, it can augment them, it can support them, and you move into how you provision health and how you empower your products more through digital means."

For Peppa, influencing mindsets and changing behaviours has been a critical element of Boston Scientific's digital success as it enhances agility across every sector.

"The other important thing that it brought was an upskilling of the organisation," she adds. "People started asking about digital, asking for courses and development opportunities around digital sales or digital marketing or digital R&D. That brought a lot of self-learning in this space."

An upskilled workforce and a digital mindset synchronised to business objectives brought rewards in multiple fields of endeavor, from inter-functional harmonisation to an energised approach to sales and connecting with customers and patients.

"On the digital and sales side, the most exciting piece we're bringing is this concept of customer centricity through personalisation," she explains. "Bringing together technologies like customer data platforms and artificial intelligence that runs on large data sets , combined with frontline tools, allows for correct information to be given to our customers on a particular product, potentially doing business and interacting through e-commerce like we have in our United States team right now or driving ultra-personalised blended learning on our products for our customers."

Peppa continues, "The possibility to order our products online, to have virtual education through webinars, through blended learning, all that combined with a good back office system that allows correct selection of what is better for each customer is what I call customer-centricity enabled by digital."

Skills Need

But digital's headlong rush has created significant challenges in accessing and connecting with fragmented healthcare systems that are going through their own technological upheavals and recruiting skilled workers.

"Life sciences will need more and more skilled workers whether they are data scientists or digital producers or digital marketers," says Peppa. "People who know how to operate in blended customer journeys are rare to find – that's my number one challenge as I think about scaling up internally.

Bridging the knowledge gap

She continues, "Externally on the digital health side, I see a big challenge in the fragmentation of our healthcare systems and how difficult it is to propose solutions that can be truly universal because different hospitals within the same region of a particular country can be fundamentally different in the way they manage their healthcare in the background.

"But I do see massive receptiveness on the side of our customers for blended interactions with us on digital sales and marketing. I think the market is ready there and customers and our patients are ready to interact more this way."

Peppa's aim is to propel digital transformation beyond the slogan into genuine healthcare system and patient outcome improvements, moving the dial to preventative health at a time when – irrespective of COVID-19 – healthcare systems are facing mountainous challenges from ageing demographics.

"I also see patients' need for information and awareness being catalysed in ways that have never been catalysed before," she adds. "I see patients taking responsibility for their own fate and supporting the health care systems that are tired right now in managing a demographic with evermore increasing patient populations with poly pathologies."

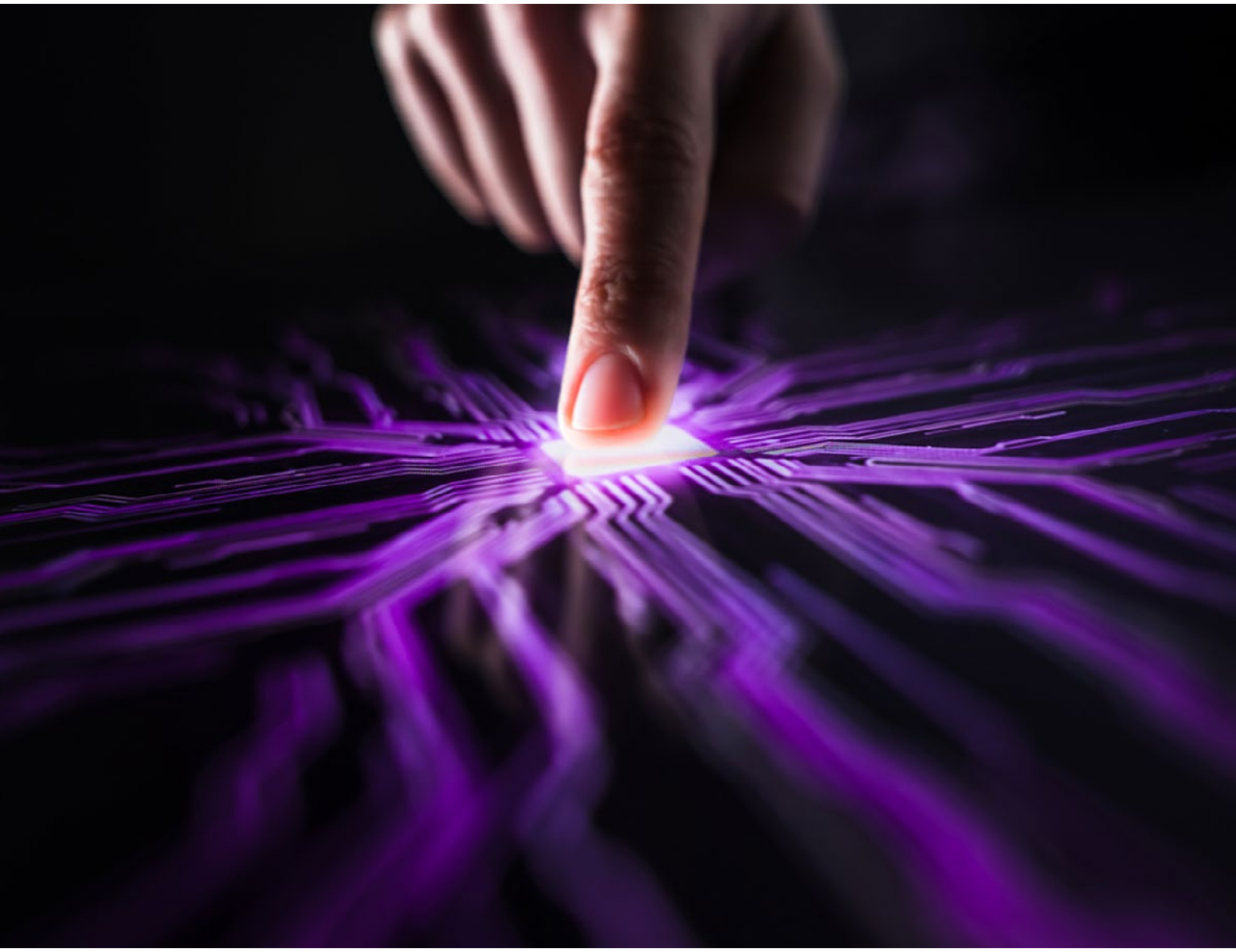
"A very well-equipped and empowered patient that can work with the health care system and not expect everything from the health care system, is a key, exciting opportunity that I see. And industry, whether we are a producer of devices or pills, or in life sciences services, could play a dramatic role in supporting that disruption," concludes Peppa.

About the interviewee

Rodamni Peppa is vice president Business Strategy and Commercial Excellence for Boston Scientific in EMEA. She is currently based in Italy where she leads a large team focused on defining the EMEA Strategic Plan as well as sales and marketing excellence initiatives. Her new challenge is to bring Boston Scientific into a new era of customer centricity. Her team leverage today's digital transformation capabilities to deliver personalised and digitally enabled customer journeys that seamlessly link the online and offline sales and marketing channels while boosting company productivity.

About the author

Eloise McLennan is the editor for pharmaphorum's Deep Dive magazine. She has been a journalist and editor in the healthcare field for more than five years and has worked at several leading publications in the UK.



Targeted agents and immunotherapies

Targeted agents and immunotherapies are two of the most promising areas for significant advancements in cancer treatment. Envision Pharma's scientific solutions division lead Rebecca Goldstein, discusses this topic and other developments that cancer patients and their loved ones should be paying attention to.

People with cancer and their caregivers have long been active participants in discussions of how they are treated, but in the current digital information age, it is becoming more common for patients to self-advocate for the latest advancements in therapy. With so many active research areas in oncology, patients and their loved ones can easily be overwhelmed by information and not know where to direct their attention.

According to Envision Pharma's Rebecca Goldstein, the developments in cancer treatment for patients to watch are those that build upon the two most revolutionary treatment advances we already have: targeted agents and immunotherapy. Oncogenic driver mutations are being found more quickly and targeted more effectively through new technology, and the first wave of immunotherapies are being improved upon by combining them either with other immunotherapies or with the standard of care.

Developments to watch

Cancer patients and their loved ones can easily get overwhelmed by the sheer number of choices available. As Rebecca Goldstein says, "The fact is we have a lot of really active drugs in cancer right now. We have drugs that work really well, we have drugs that can cure cancer, we have surgeries that can cure cancer."

Unfortunately, these treatments don't work for everyone. Not all patients will benefit from any given drug, and some of those who do benefit will not benefit long-term. Some patients will experience a remission for a time, until the cancer succeeds in finding a way to begin to grow again. When that happens, the cancer comes back, and the patient needs another option – until there are no more options.

Other patients don't benefit from the established standard of care because they can't tolerate the drugs that we've got. The drug itself is too toxic for them, or they have some health condition that disqualifies them from receiving that drug.

According to Goldstein, "When patients or families are trying to learn about the latest advances in cancer treatment and ask me where to focus, I say I would be looking specifically for new advancements that will help me in one of these areas: Do I have a chance to live longer? Can I keep my cancer in check for longer? Can I be spared from certain side effects or just improve the quality of the time that I have left?"

Targeted agents

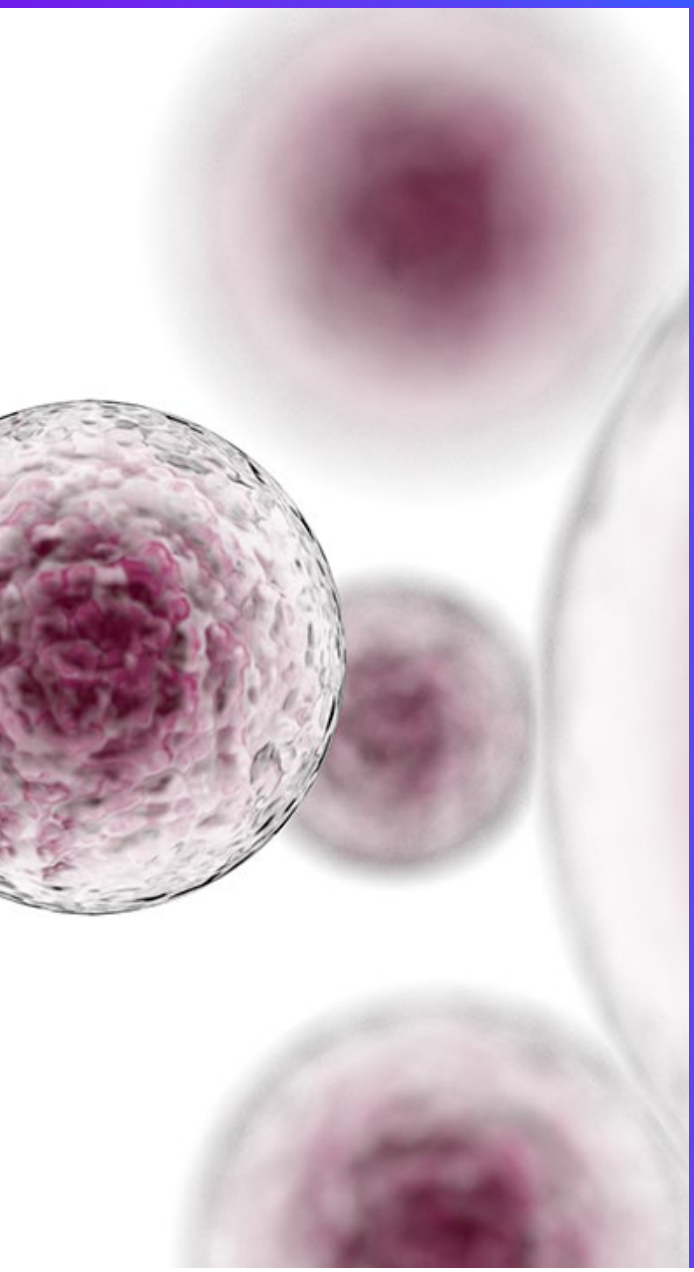
Major improvements in oncogenic targeting have fallen into two approaches: finding the targets in patients more quickly and easily and improving the technology by which we target the mutations.

The most relevant innovation is already here: instead of looking for oncogenic drivers individually, we can put them in panels. Ongoing improvements in multi-gene panels are gradually lowering the price of these tests and making them accessible to more patients.

Innovative therapies that are making oncogenic targeting better are using different novel technologies to more thoroughly target a particular pathway, such as bi-specific antibodies; or those that use the mutation as a delivery mechanism for another stronger drug, such as antibody-drug conjugates.

Antibody drug conjugates have recently experienced major leaps forward in terms of design elements. "There are a lot of different design elements for antibody drug conjugates that can impact how well the actual molecule works in patients," explains Goldstein. "The way that the chemotherapy is linked to the antibody, the type of chemotherapy that you choose, there are all sorts of design elements that you can play with."

We've recently seen the first positive phase III study that put two ADCs developed against the same target head-to-head in the DESTINY 03 trial: proof that relatively small differences in drug design can have a significant impact on what happens to patients.



Immunotherapies

Possibly the most notable advancement in immunotherapy was with immune checkpoint inhibitors, which work by turning the patient's immune system back on after the cancer has turned it off in order to "hide." However, dramatic increases in lifespan don't happen for most patients. We are continuing to get better and better at knowing how to extend the life-extending benefits of immune checkpoint inhibitors to more and more and more patients by pairing them with other drugs that work directly against the tumour.

"First and foremost, if you combine immunotherapy with the standard of care, you can sometimes extend the benefits of immunotherapy because you're providing an extra level of efficacy to help get over the hump," says Goldstein. "For instance, when you combine immunotherapy with chemotherapy, in some tumour types, you get the benefit of rapid tumour control from the chemo, but then you have the immunotherapy that can encourage the immune system to respond to the cancer. You'll get that long-term benefit from an immune system that continues to survey the patient's system and eliminate any residual cancer."

Because immunotherapy targets the patient's immune system, you can also combine two different immunotherapies to target multiple parts of the immune system. For any individual patient, this combination strategy improves the chances that the treatment is targeting the correct part of the immune system that their cancer is using to hide.

According to Goldstein, "That's exciting because the immune system is very, very complex. That means there are lots of different ways that any individual cancer may be using to hide, also lots of different ways that you can intervene with a drug. Sometimes, if your cancer is not responding to one immunotherapy, it's because that particular therapy is targeting part of the immune system that the cancer isn't necessarily leveraging. You might need a different immunotherapy, or you might need to put two of them in combination."

Clearly, we need to get better at matching individual therapies to individual patients based on what their own anti-cancer immune responses look like. There are some, but not many, tests that can be done to see how a patient's own cancer may be hiding from their immune system. Patients should never shy away from asking their health care team about the latest advancements and technology in cancer testing.

Measuring the value of treatment

As more and more patients become eligible for novel targeted therapy and immunotherapy and new treatments are used earlier in the course of cancer, it's increasingly important to balance incremental improvements in care with health system impacts to ensure every patient has the same access to the best care. Yet, as Goldstein points out, the question of how to achieve this balance is still unanswered.

The gold-standard question in oncology is, "Do patients live longer if they get this treatment versus if they don't?" but with advancements in cancer treatment, more and more patients now get multiple lines of therapy in sequence. It then becomes harder to tell what impact each treatment has on a patient's overall lifespan.

To truly define the impact of a new therapy, Goldstein suggests additional questions that look to what patients' priorities are: not just to live longer, but to live cancer-free for longer—to have more time when the impact of the disease does not burden them.

As Goldstein says, "Can you functionally cure more patients? Can you keep disease from coming back, which makes it much harder to cure every time it happens? Can you improve the quality of the days that each patient has, not just physically but mentally and emotionally?" The answers to these questions will demonstrate the true value of any therapeutic advancement.

About the interviewee

Rebecca Goldstein currently serves as a scientific solutions division lead at Envision Pharma. A PhD-trained cell biologist and immunologist, Rebecca has held many roles over the years, supporting oncology and immuno-oncology development teams as a researcher and in strategic scientific communications. She lives in central New Jersey in a full house with her husband, three children, extended family, and two Siberian huskies.

About the company

ENVISION PHARMA GROUP

Founded in 2001, Envision Pharma Group is a global, innovative technology and scientific communications company serving pharmaceutical, biotechnology, and medical device companies. Envision is a leading provider of evidence-based communication services and industry-leading technology solutions (iEnvision) that have applicability across many areas of medical affairs and related functional responsibility. Envision Pharma Group provides services and technology solutions to more than 90 companies, including all of the top 20 pharmaceutical companies.

Envision has 20 offices: six in the United Kingdom – Bishop's Stortford, Glasgow, Horsham, London, Wilmslow, and Alderley Edge; one in Serbia – Subotica; one in Hungary – Szeged; one in Coimbra, Portugal, nine in the United States – Fairfield and Glastonbury, CT, Philadelphia and Wyomissing, PA, Warren, NJ, Boston and Melrose, MA, Powell, OH, Pasadena, CA; and two in the Asia-Pacific region – Tokyo and Sydney. The company employs 1100+ team members, including over 250 highly qualified and experienced in-house medical writers, and 200 technology solutions team members who provide software development and customer support. To find out more, visit www.envisionpharmagroup.com.

The rise, acceleration and acceptance of telehealth adoption

'Healing at a distance' is the literal meaning of telemedicine. According to the World Health Organisation, it is defined as the use of ICT to improve patient outcomes by increasing access to care and medical information, incorporating new advancements in technology and responding and adapting to the changing health needs and contexts of societies.

Within this context, it goes without saying that Covid-19 has led to a big push towards digital healthcare solutions. Until 2020, the adoption of telemedicine across Europe was fairly slow and limited, but social distancing requirements and the consequent advancements in technology facilitated its accelerated adoption in healthcare systems.

Indeed, a Digital Health Trends survey conducted by Research Partnership and Sermo in March 2021 (with a mix of HCPs in the US, EU5 and China) reported that nearly 70% of HCPs regularly used telemedicine – as well as other digital healthcare solutions, – during the pandemic.

Furthermore, another qualitative study we carried out with patients and HCPs in the US, Germany and China in May/June 2021 reported positive experiences with telemedicine on both sides for convenient, time-saving consultations. HCPs also felt it was helpful to have more time to reassure and empathise with patients, with less time-pressure and more relaxed consultations.

"We have learned new ways of working during Covid. Some are now the best ways of delivering care."

Ophthalmologist, UK (Nov, 2021)

The scales are tipping back towards face-to-face consultations

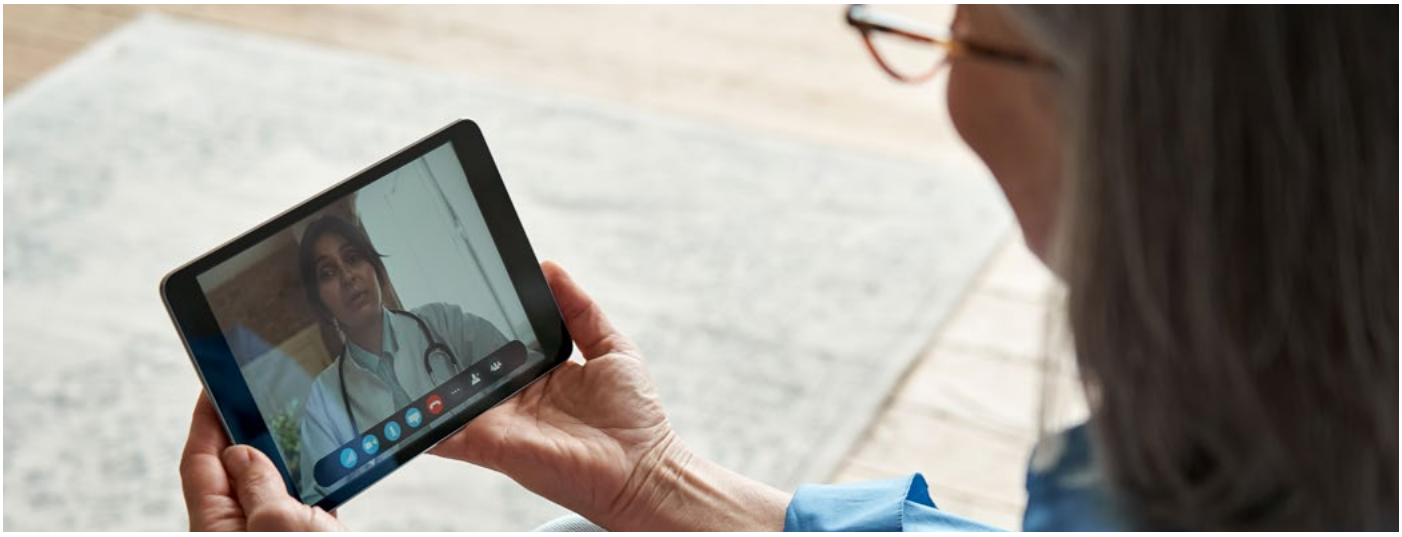
But how is the utilisation of telemedicine fluctuating as the pandemic evolves? A survey we conducted with Medefield in November 2021 (with n=157 HCPs in both primary and secondary care in the EU4 and UK) revealed that physicians are currently increasing their volume of face-to-face interactions with patients and feel mostly positive about this.

Attitudes vary by region, however, with UK physicians spending only 60% of their time in direct face-to-face consultations, versus ~80% in France and Italy. UK GPs in particular, are spending close to 40% of their time in teleconsultations in contrast to lower averages (~25%) in other markets.

The reluctance of UK GPs to return to face-to-face consultations may be the reason for the government's need to provide incentives.

In October 2021, it was announced that GPs in England will receive £250m to improve their services, but only if they increase the number of patients being seen face-to-face under a new government and NHS action plan.

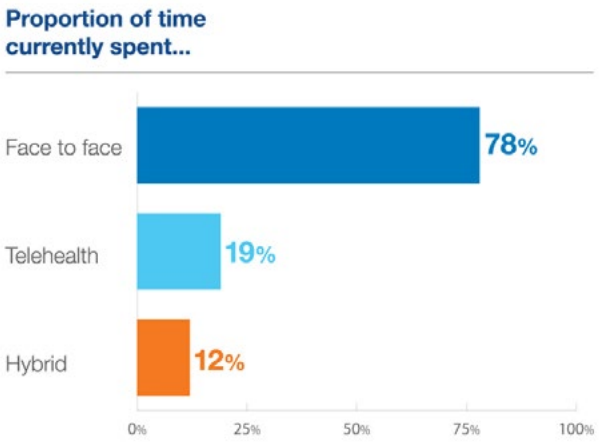
This drive has been cited as a way to relieve growing pressures on A&Es, which the government is attributing to patients not having access to see GPs in person (although disputed by the Royal College of GPs).



Only 58% of patients were seen face-to-face in August 2021 (the first full month following the ending of restrictions), compared with 54% in January and more than 80% before the pandemic, which correlates with our survey.

A behavioural shift back to face-to-face interactions corresponds with the results from our survey highlighting mixed perceptions on satisfaction with telehealth.

Those physicians reporting lower to moderate satisfaction are now seeing an opportunity to return to face-to-face consultations and overcome some of the perceived underlying telehealth challenges pertaining to managing patient compliance (37%), remote diagnostics (35%) and overall disease management (32%).



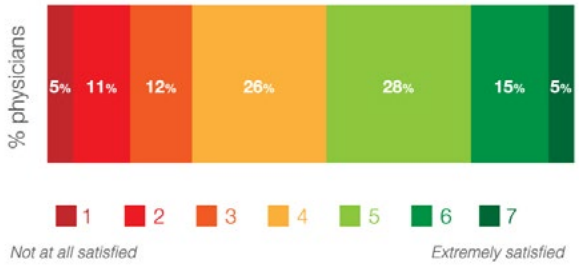
Currently, what proportion of your time do you consult with your patients using the following methods?

(n=157; EU4 + UK; mix of primary and secondary care)

The perceived preference for face-to-face consultations is also reflected in our previous research that highlights lingering doubts about telemedicine, most notably the reliability of remote diagnostics for more complex cases, especially if HCPs are dependent on patients correctly and confidently, carrying out self-assessments.

This theme ties in with patient apprehension over aspects such as accurate diagnosis and patient desire for in-person consultations to build rapport with their physicians. Limited online prescription services and data privacy concerns were also cited as concerns from both the HCP and patient perspectives.

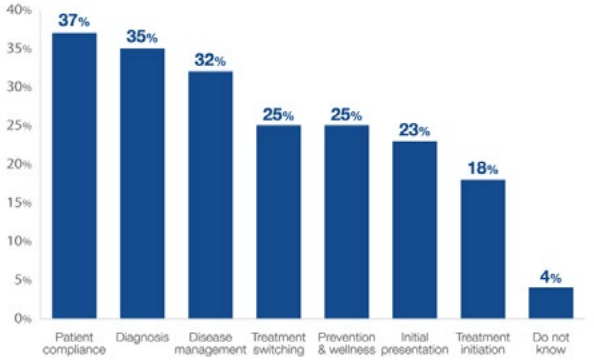
Current satisfaction with telehealth consultations



Based on your experience with telehealth consultations, how satisfied are you with the management of your patients via telehealth on a scale of 1 to 7, where 1 means 'not at all satisfied' and 7 means 'extremely satisfied'?

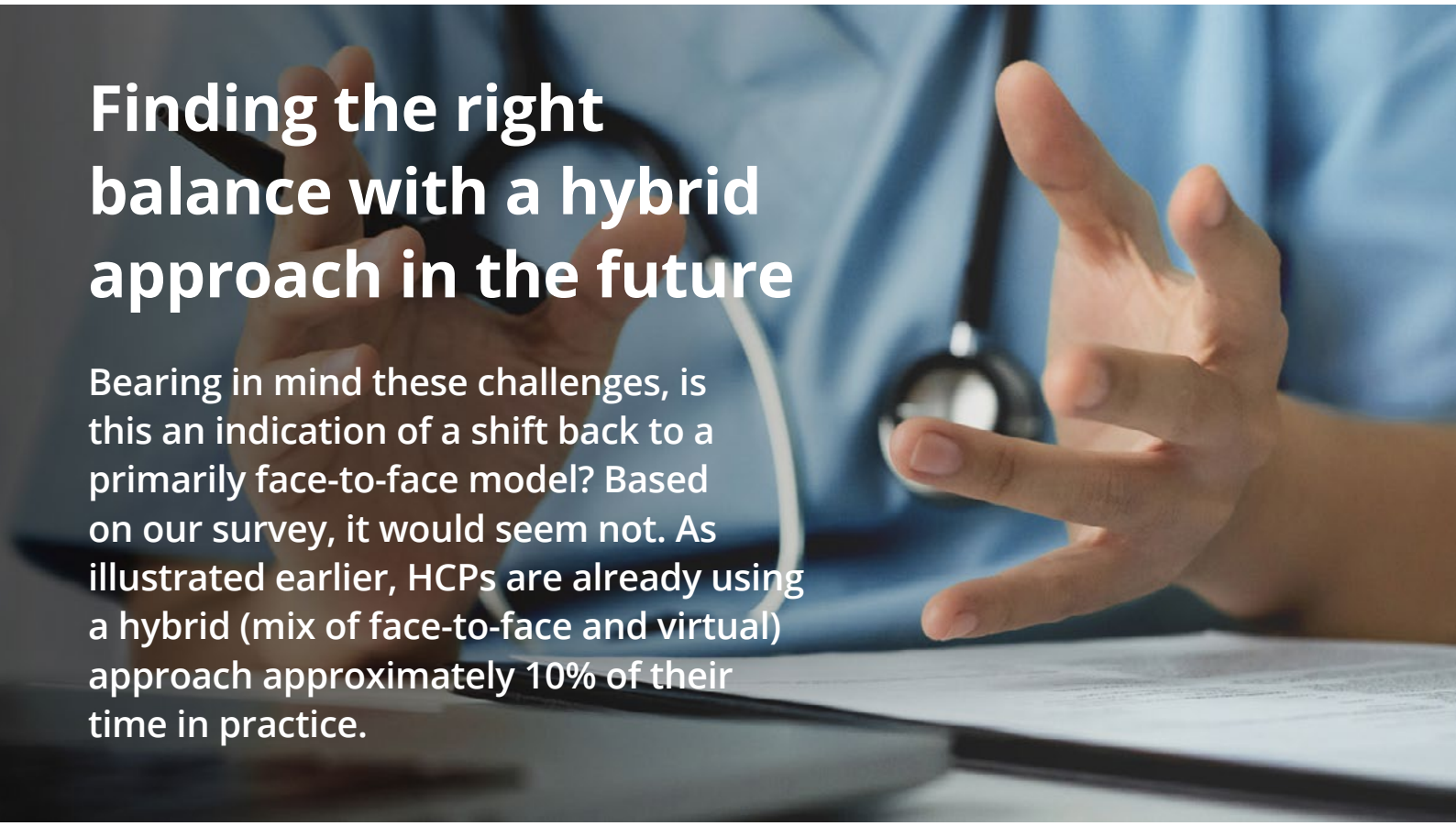
(n=157; EU4 + UK; mix of primary and secondary care)

Most challenging points of patient journey conducted via telehealth consultations



At which point in the patient journey do you consider consultations through telehealth most challenging? Please select your top two perceived challenges.

(n=157; EU4 + UK; mix of primary and secondary care)



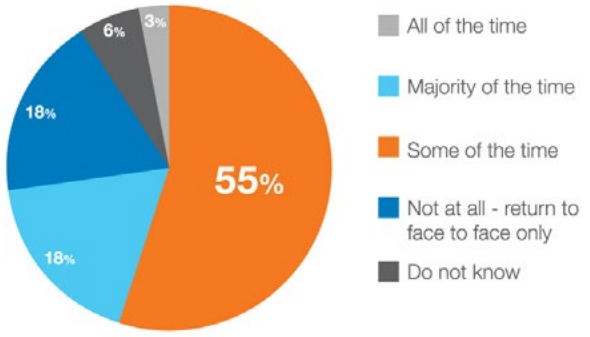
Finding the right balance with a hybrid approach in the future

Bearing in mind these challenges, is this an indication of a shift back to a primarily face-to-face model? Based on our survey, it would seem not. As illustrated earlier, HCPs are already using a hybrid (mix of face-to-face and virtual) approach approximately 10% of their time in practice.

In addition, more than half of our sample surveyed expect to use this consultation type some of the time to manage patients, in the next three years, with 20% expecting to use it a majority of the time. GPs, especially in the UK, would not expect to return to solely in-person consultations in contrast to other specialities who anticipate more face-to-face interactions.

Another key point from our sampled physicians is that the hybrid model will be strongly based on using the most appropriate consultation type dependent on the circumstance, with many in favour of using teleconsultations for routine follow-up appointments.

Expected usage of hybrid approach



Three years from now, how frequently do you expect to use a hybrid approach (mix of telehealth and face to face / in person) to manage patients?

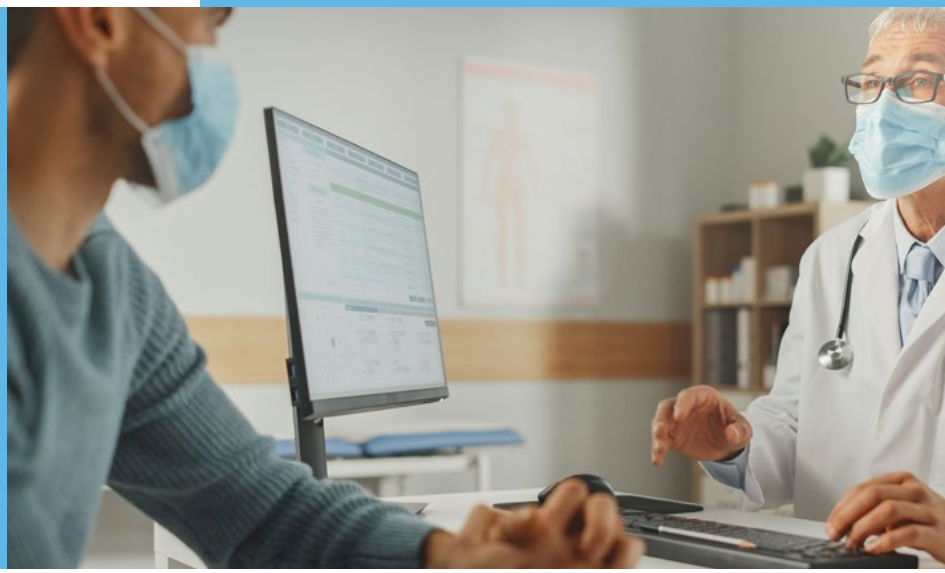
(n=157; EU4 + UK; mix of primary and secondary care)

"Really, I still need face-to-face and in-person interaction for some phases of the clinical process [diagnostics, disease management]."

Dermatologist, Spain (Nov, 2021)

"I hope to return to face-to-face interactions, limiting telehealth to scheduled 'follow-up' appointments, in absence of disease variation."

Cardiologist, Italy (Nov, 2021)



This finding is corroborated by other studies conducted at Research Partnership that show user experience with telemedicine has mainly been positive. Moreover, there is consensus that usage will become established in the future alongside in-person appointments, dependent on the stage of the patient's journey. In the UK, for example, this scenario is included in the NHS Long Term Plan to optimise and increase the range of digital health tools and services.

"People will be able to seek health information and support online and choose whether they speak to a doctor on the phone or in person. A wide range of NHS-approved apps will help people get ongoing support to help them manage their health and wellbeing needs, backed up by face-to-face care when this is needed."

NHS Digital Transformation

Considering what we have learned since the start of the pandemic, it is valid to conclude that technological advances are swift – as seen with some markets trialling telemedicine apps/platforms – and digital health tools will continue to develop and improve at speed.

In this sense, there are expectations that current telemedicine gaps will be filled. Consequently, the hybrid model will extend beyond routine follow-ups and will be utilised confidently for clinical purposes such as diagnosis, resulting in convenience and time benefits, as well as potential health economic cost savings in the long run.

About the author

Marietta Fernandes is an associate director at Research Partnership.

About Research Partnership

Research Partnership is the largest independent healthcare market research and consulting agency in the world. We collaborate with clients from the global pharmaceutical, medtech and biotech industries, providing research intelligence and strategic recommendations that elevate healthcare brands and power their success. Director An-hwa Lee and Associate Director Marietta Fernandes will be co-hosting a webinar on the future of telemedicine and required market insights for successful development of telemedicine products and services in December. Visit the Research Partnership website to find out more and register.

Interview with Benoit Creveau, head of commercial operations Specialty Medicines at Daiichi Sankyo Europe.

What does the current picture of cardiovascular disease in Europe look like?

Surprisingly for many, cardiovascular disease (CVD) is Europe's leading cause of death – not cancer, as many people would assume. Last year, over 60 million people in the EU – more than the population of Italy – were living with CVD.

While there has been some progress in understanding the prevention and treatment needs for CVD, it often does not receive the attention it duly deserves. As an industry, we have a responsibility to continue to shine a spotlight on this critical health issue and drive innovation that can protect lives.

Why does it continue to be Europe's leading cause of death?

There is no one answer to this question. The causes and risk factors for CVD are many and highly varied, as reflected in clinical guidelines. The recent updates for the prevention of CVD from the European Society of Cardiology now include direction to minimise the risk of cardiovascular (CV) events through a diverse range of management strategies that go beyond the tradition of diet and lifestyle management. Such topics include measurement of frailty, psychosocial factors, goals for lipid levels, blood pressure, diabetes, air pollution and body composition.

I feel certain misunderstandings of CVD contribute to the unacceptable levels of mortality we see across Europe. There is a perception that CVD is a condition that affects only older generations which is simply not true. This adds to the vast numbers of people with undetected CV risk factors, meaning that when they finally have an event, it is more serious than it would have been if they had identified and managed the risks at an earlier stage.

To change the impact of CVD, we must collaborate as a united community to find solutions for patients. Our role within the industry allows us to support open dialogues between healthcare practitioners, patient groups, governing bodies and the scientific community so that we can, together, lessen the impact of CVD.

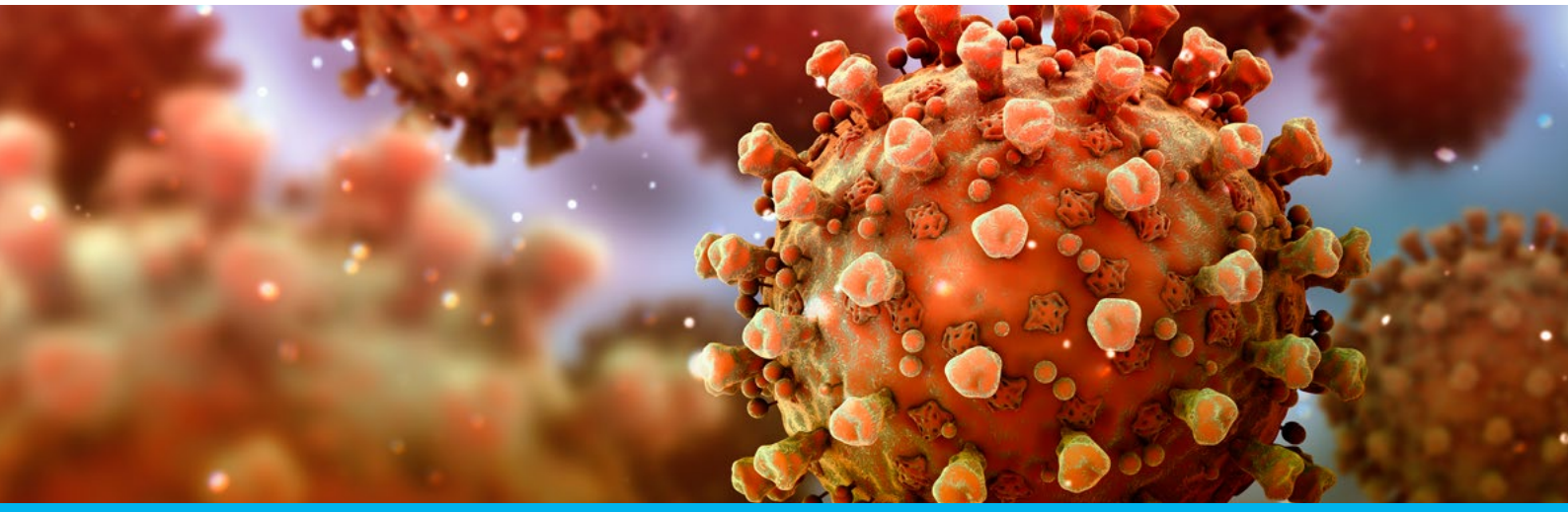
"I feel certain misunderstandings of CVD contribute to the unacceptable levels of mortality we see across Europe. There is a perception that CVD is a condition that affects only older generations which is simply not true"

What impact did COVID-19 have on CVD?

We know that patients with diagnosed CVD are likely to have an increased risk of death and experience more severe COVID-19 symptoms. However, from my perspective, the biggest impact of COVID-19 has been the dramatic reduction in cardiovascular healthcare utilisation, which has fallen by around a third since the start of the pandemic.

This means that people are not being diagnosed and remain at high risk of experiencing a heart attack or stroke. This is leading us to a surge in serious CV events and deaths across Europe, which could have been prevented or delayed.

Throughout the early phases of the pandemic, access to medical care was very restricted as services were rightly redirected to care for patients with COVID-19. However, as access to medical services is slowly restored, we cannot continue to look at the challenges of CVD through the same lens as we did pre-pandemic. Instead, we must listen to the needs of the clinical community to help evolve care pathways and ensure prevention is a core focus.



Post-pandemic, will COVID-19 have a lasting impact in CVD?

The short answer is, we don't know yet. Whilst we know that there is a correlation between COVID-19 and CVD, it is difficult for us to predict the long-term consequences.

What we can do, though, is work with healthcare professionals and industry peers to address the immediate issues ahead of us and deepen our understanding of the effects of COVID-19. We will continue to work closely with experts to address any long-lasting consequences on CV health.

How is Daiichi Sankyo Europe involved in CV health?

We've been active in the CV landscape in Europe for more than 20 years – with over 120 years of scientific expertise and corporate origins in Japan. CV health is a key part of our business, and devoting our energy to improving patient outcomes in CVD is engrained in the foundations of our organisation.

We also understand that no one can find a solution alone. That's why we partner with professional bodies and companies where we can combine our expertise and bring much-needed treatments to patients.

Can you explain the company's commitment in the area?

Due to the high prevalence of CVD in Europe, most of us will know somebody affected by CVD at some point in our life. We understand that the impact of the disease is felt not only by patients, but also by their loved ones and those who treat them.

Our mantra of 'caring for every heartbeat' drives us and I see it living every day through my colleagues. From furthering our understanding of CV science, through improving access to treatments and preventative support, to ensuring we understand the real patient experience – we know that the work we do supports so many people.

"Our mantra of 'caring for every heartbeat' drives us and I see it living every day through my colleagues"

How does Daiichi Sankyo Europe seek to understand patient needs?

To truly understand the needs of patients, we must know their lived experiences and those of the healthcare professionals that treat them. On way that we proactively seek this is through our investment in clinical studies that help to investigate the current challenges related to routine patient care.

We have several real-world evidence clinical trials that help us better understand what it is like to live with CVD. The SANTORINI study, for example, looks at the effectiveness of treatment and management systems in Europe for people with high cholesterol. Insights from studies such as SANTORINI and ongoing registries help shape our business decisions and inform our work every day.

Our patient Hackathon, CardioXplore, is another example. By opening our platforms to patients and healthcare professionals, we have been able to facilitate the sharing of insights and ideas. Our aim is that what we learn will lead to the development of concrete, deliverable solutions to help improve CVD care.

How long has Daiichi Sankyo Europe been involved in CV health and how has it helped improve patient outcomes?

We have more than two decades of experience in CV health in Europe. During that time, more than 40 million patients across Europe have received our therapies across a range of conditions. We have a fantastic expertise in bringing treatments to market for the benefit of those who need them, which is the fundamental reason I love my job.

How do you support healthcare professionals to reduce the patient burden of CVD?

We truly believe we need to take a patient-centric approach to addressing the CVD burden. We must view patients as the people they are, not just in terms of their condition.

Through this holistic approach, we can support and partner with the medical community to look beyond the immediate CV health concerns and identify additional considerations unique to the patient, such as co-morbidities and polypharmacy. Through this approach, we work to support them to make informed clinical decisions that ultimately improve outcomes.

What future support plans are you working on?

I find our CardioXplore initiative really exciting. It's a reflection of our drive to bring together expertise and co-create solutions that truly deliver for patients and healthcare professionals to support them in addressing the unmet needs in CV care.

Self-empowerment, the right supporting tools, and enhanced motivation are, we believe, at the core of helping to prevent CV events for people who are at-risk. We recently conducted the two-day CardioXplore patient hackathon with multidisciplinary teams. The objective was to collaboratively explore entirely new approaches to CV care and generate ideas.

Our newly established Digital Innovation Hub is now exploring a selection of the most innovative ideas and creating plans to bring them to life. Ultimately, our goal is to help create viable solutions that can enhance care across Europe.

"Self-empowerment, the right supporting tools, and enhanced motivation are, we believe, at the core of helping to prevent CV events for people who are at-risk"

Where does Daiichi Sankyo Europe expect to have the greatest impact on improving CV health in the future?

As we look ahead, I believe that our holistic approach to CVD management and our close collaboration with the medical community will continue to positively impact the standard of patient care in this space.

By truly understanding the needs of healthcare partners and working closely with payors, innovators, and other scientific and pharmaceutical organisations, we can all play our part in improving the CV ecosystem and ultimately driving innovation that will change patients' lives.

This article is sponsored by Daiichi Sankyo Europe.

December 2021
DSC/21/0318

About the interviewee

Benoit Creveau is currently head of Commercial Operations within the Specialty Business Unit at Daiichi-Sankyo Europe. In this role, Benoit is responsible for a group which sets the commercial strategy and implementation roadmap for our specialty portfolio.

DS specialty group's ambition is to deliver the best customer experience by tirelessly supporting healthcare professionals to make the right decisions for patients. Benoit holds a postgraduate program from ESCP Business School, he started his career with Bristol Myers Squibb and then joined Daiichi-Sankyo Europe where he held different marketing and commercial roles in cardiovascular and oncology.

About the interviewee

Daiichi-Sankyo

Daiichi Sankyo is dedicated to creating new modalities and innovative medicines by leveraging our world-class science and technology for our purpose "to contribute to the enrichment of quality of life around the world." In addition to our current portfolio of medicines for cancer and cardiovascular disease, Daiichi Sankyo is primarily focused on developing novel therapies for people with cancer as well as other diseases with high unmet medical needs. With more than 100 years of scientific expertise and a presence in more than 20 countries, Daiichi Sankyo and its 16,000 employees around the world draw upon a rich legacy of innovation to realize our 2030 Vision to become an "Innovative Global Healthcare Company Contributing to the Sustainable Development of Society."

An open call for innovation

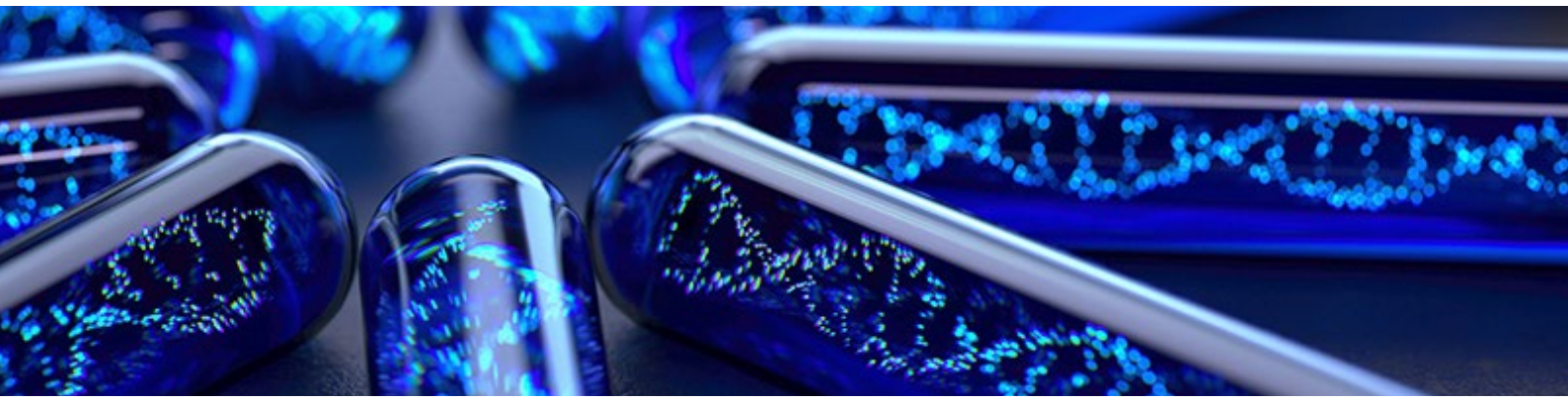
There is a bright future ahead for open innovation in pharma, as Almirall executive vice-president, research and development chief scientific officer Karl Ziegelbauer explains.

Innovation is the lifeblood of the pharma industry. Companies depend on this progress to develop new product offerings and drive revenue, while patients rely on the treatment outcomes of innovation projects.

Open innovation examples appear throughout the history of pharma; however, the industry's highly competitive nature has fostered a siloed environment where drug developers and academic researchers operate separately.

The arrival of the Covid-19 pandemic threw the topic of industry partnerships into the spotlight as key players across the healthcare field (as well as a number of cross-industry volunteers) began to collaborate in the race to counteract the impact of the virus.

Having witnessed the efficacy and financial benefits that pooling resources can facilitate, key players across the global healthcare industry are warming up to the idea of working together to develop new treatments.

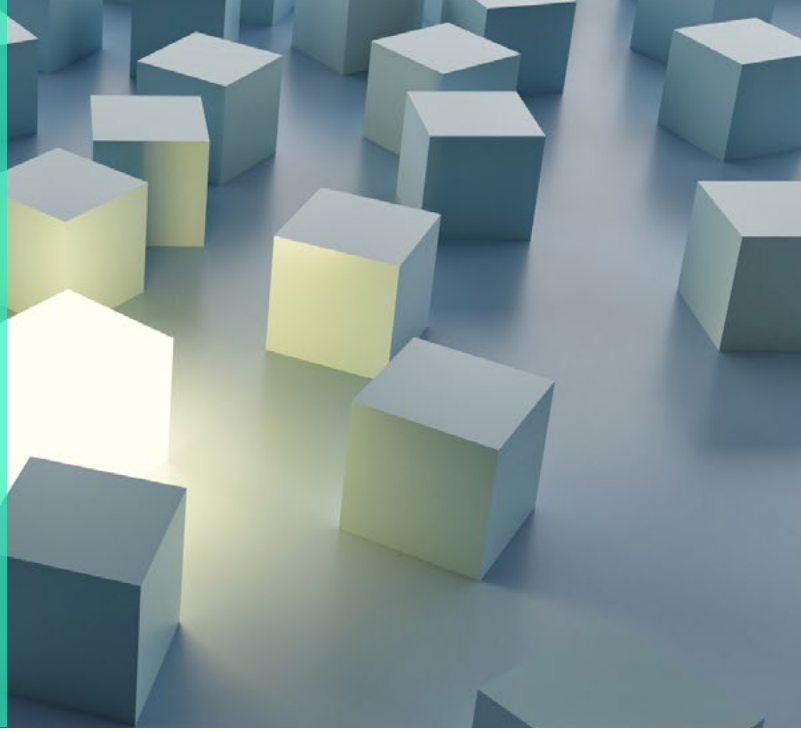


Over the past five years, Almirall has been a leading figure in the drive for open innovation in dermatology. The motivation behind this movement is to improve the capabilities of industry members and foster connections with some of the most exciting and knowledgeable minds in the sector.

For Almirall's executive vice-president, research and development chief scientific officer Dr Karl Ziegelbauer, this changing attitude towards collaboration is a positive step in the right direction.

"Innovation, and the investment in innovation, has significantly increased both in the academic and in the industry sector," he says. "For me, open innovation is actually critical to arrive at the end of a competitive product offering."

Changing attitudes to innovation in pharma



A biochemist by training, Ziegelbauer has amassed almost three decades of experience in the pharma industry. During this time, the drug-development landscape has undergone a drastic overhaul in recent years.

"When I started, we mainly had small molecules," he says. "Today, we have a very different range of modalities that are available as therapeutic principles, which means you need to reach out in order to get access because you're not able to do this all on your own."

With an influx of new, complex technologies, data sets and scientific discoveries, companies have a vast array of potential resources from which to draw. However, accessing these tools is an expensive task.

For smaller outlets, such as Almirall, rethinking the innovation process is a core part of delivering results. The siloed method of the past is quickly falling out of favour as more companies recognise the benefits of working in partnership with other departments and organisations across the medical field.

Alongside the expert insights that collaboration can offer, partnering with outfits that specialise in a particular technology can dramatically reduce the financial burden for drug development companies.

"There are situations where you simply need somebody to perform a certain service or piece of work for you, which you can do more flexibly externally."

"There are situations where you simply need somebody to perform a certain service or piece of work for you, which you can do more flexibly externally," explains Ziegelbauer.

Instead of paying thousands upon thousands to develop and maintain systems and devices that are only used once or twice per year, scientists can partner with another industry expert to gain immediate access to both the technology and years of knowledge provided by the project partner.

"In terms of research collaboration, we access capabilities that we need to discover and develop drugs that we don't have,' he says. "I think you're well-advised to reach out and work with others because there is so much know-how and data insights being generated that you want to have access to make your own programmes better."

Creating connections

Pooling knowledge from a variety of sources opens up avenues of innovation that could have otherwise been unobtainable due to financial or capacity limitations. However, identifying the right partner for the right project is a critical part of this process, as these early connections can spark long-term strategic collaboration between companies.

"What we're ideally looking for is a partner that provides complementary skills and capabilities, with the idea that by combining complementary skills and capabilities, you have a better chance to successfully discover and develop a drug.

"In medical dermatology where Almirall's focus is, this is even more pronounced because you have the unique opportunity to develop drugs topically."

By working together, researchers and companies can focus on developing a deeper understanding of disease drivers and patient needs. And once forged, these partnerships can transition into long-term collaboration efforts that drive innovation for years after the initial project is complete.

Crowdsourcing for collaborators

Creating connections between different parties is a challenge without the right tools. To help foster collaboration in the industry, Almirall launched an R&D open innovation platform, AlmirallShare, in 2017.

Through the initiative, prospective partners from around the world can submit proposals that they believe could answer the company's call for ideas that will accelerate the generation of new treatments for skin conditions.

"Since the launch in 2017, we have been in touch with more than 1,000 scientists," says Ziegelbauer. "Given that dermatology is not that big of an area, it is quite an accomplishment, and 510 proposals have been received on different topics over the years."

Each of AlmirallShares's crowdsourcing drives is centred around a core theme. Its most recent call launched in July, with a focus on finding innovative therapies for skin disease. If selected, the chosen partner may be eligible for an advanced research or preclinical development collaboration with the company, research grants and further asset characterisation on key dermatological assays.

"We're the early pioneers in reaching out to small companies to explore this whole world of digital tools for the purpose of drug discovery and development," says Ziegelbauer. "It's fascinating the different elements where this now affects pharmaceuticals."

Working together to help patients

For businesses, the cost-saving benefits of open innovation may be a significant draw, but for Ziegelbauer, there is an even greater reason to foster industry collaboration – patients.

Access to shared technology and the combined efforts of interested parties is likely to accelerate the path from lab concept to approved products. Not only will this result in more treatment options for patients, but a collaborative approach may also help drive the transition from treating symptoms to curing conditions.

"Traditionally, dermatologists prescribed patients all kinds of creams. You have a corticosteroid cream that works for everything, UV therapy, sometimes just a superficial surgery or cryotherapy. All very localised, very topical, but not very effective.

"Now, with the introduction of monoclonal antibodies, for example, targeting certain cytokines, IL-17 or 23 for psoriasis, or IL-4 and IL-13 for atopic dermatitis, we achieve something that I would call long-term symptom control. I think that needs to be our ambition."

Rather than have multiple organisations pulling in different directions, the industry is demonstrating that pulling together can accelerate advancement towards an end goal. Moreover, as new practices and technologies emerge, so too will opportunities for collaboration.

As Ziegelbauer concludes: "That is an ongoing process of establishing different ways to engage with the academic community and the external community and trying to identify the next exciting thing in dermatology."

About the interviewee

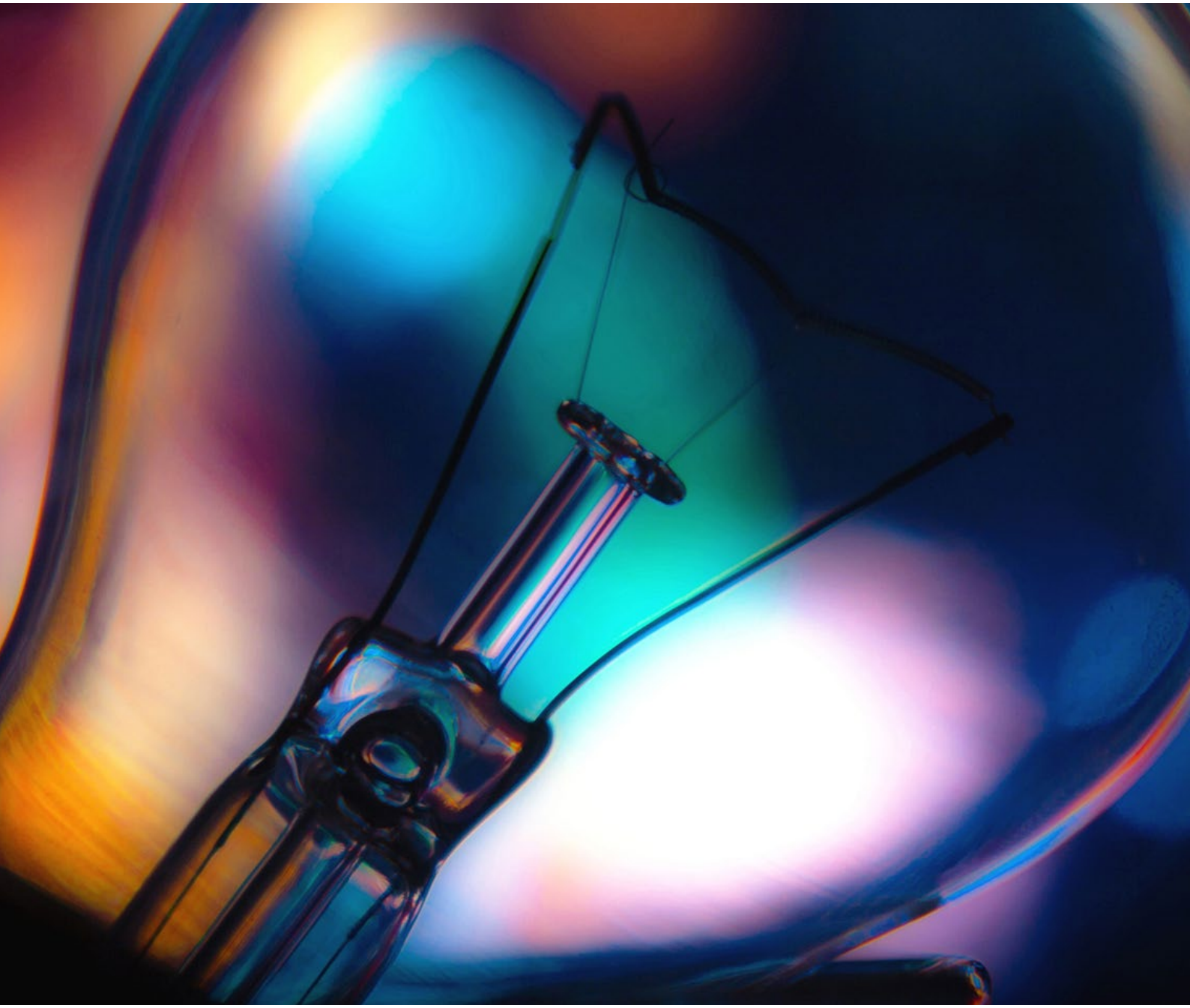
Dr. Karl Ziegelbauer is the executive vice-president, research and development, chief scientific officer for Almirall.

He holds a PhD in Biochemistry from the University of Tübingen (Germany). Before joining Almirall, he served as senior vice-president and head of open innovation & digital technologies at Bayer Pharmaceuticals. Dr. Ziegelbauer has three decades of experience in drug discovery in international markets such as Germany, Japan, and the United States.

He has developed most of his career at the German multinational pharmaceutical company and has assumed positions of increasing responsibility, holding senior vice-president roles in various medical research fields. Dr. Ziegelbauer has also co-authored more than 50 scientific publications covering basic research as well as drug discovery topics.

About the author

Eloise McLennan is the editor for pharmaphorum's Deep Dive magazine. She has been a journalist and editor in the healthcare field for more than five years and has worked at several leading publications in the UK.



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A multi-platform approach: the future of patient services

Andy Graves and Dr Clare Moloney of IQVIA discuss how the COVID-19 pandemic accelerated the adoption of digital patient services and how future deployment alongside traditional methods could offer the best of both approaches. They outline how the momentum developed in the utilisation of digital solutions during this period can be built on to create meaningful patient services.

All stakeholders in the delivery of patient services had to react quickly in response to the pandemic. Prior to COVID-19, the overall industry trend had been building towards creating patient-centric, personalised initiatives providing care-management support to individuals across therapeutic indications, states Andy Graves, product and strategy director, patient support and adherence practice at IQVIA.

With the onset of the pandemic, when the need to augment traditional care models became urgent, it was necessary to launch digital enabled services to support people to manage health conditions safely from their own homes. The challenge facing all stakeholders will now be how to leverage learnings from the rapid rollout of remote engagement , determine the most impactful elements and create a robust evidence base for future service evolution and scale-up.

A key philosophy for developing these patient support services going forward will centre on the idea that one size does not fit all and how to successfully engage with the person living with a health condition on an individual basis. To achieve this, the industry is listening closely to patient associations and communities to learn what services suit particular groups and also how best to support family members and care partners, as often they from an integral part of care, but have different needs to the patients themselves.

Dr Clare Moloney, director, behavioural science, medical and patient communications at IQVIA, outlines that this can mean different services offered depending on the age of the individual involved – for instance, the type of service that can support a teenager living with a rare disease to better self-manage and negotiate the healthcare system is very different from that required to support the parents of a young child who find themselves having to deliver an injection every day, even when the condition is the same. This can lead to a real opportunity to learn about and help alleviate the challenges that people living with a health condition face.

The necessary focus on delivering digital solutions is transforming the ways that people can be engaged and supported, through smartphones or smart, technology-enabled solutions. At the same time, maintaining a personal connection through interactions with healthcare professionals (HCPs) and care teams is still of paramount importance.

Converging these engagement models into a 'multi-platform approach' has been accelerated by COVID-19 and looks set to continue as the future of patient services, where the strength of both can be brought into play.

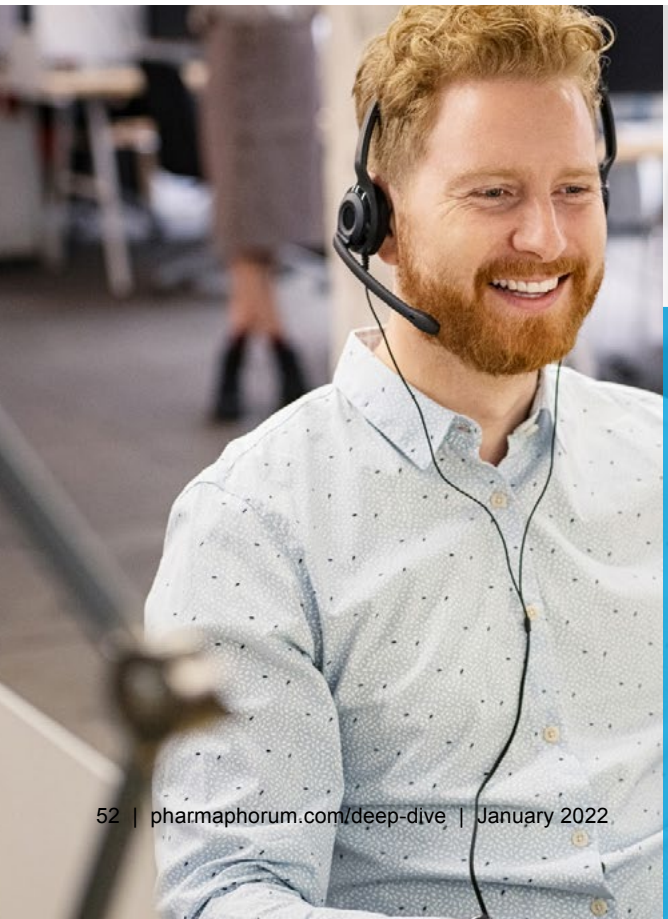
Remote engagement

The pandemic environment – where solutions were rapidly established and tested in real-world settings – has provided the industry with a lot to evaluate. From a behavioural science perspective, Dr Moloney identifies that the emergence of COVID-19 has even changed the general public's perception of medicine, including a greater awareness of the process behind drug development, leading to an increase in the need to focus on and facilitate shared decision making

However, in addition to providing a greater sense of empowerment this can lead to people being influenced by negative or incorrect media. This dynamic had already been developing due to the easy access people have to information on the internet, but the health-related concerns of the pandemic drove this to new levels.

In turn, this means that there needs to be a heightened focus on creating credible, evidence-based solutions, explains Graves. “Having credible information well-positioned, through the right channel, in the right time, is essential for healthcare providers and life-science companies to best support their patients” he says.

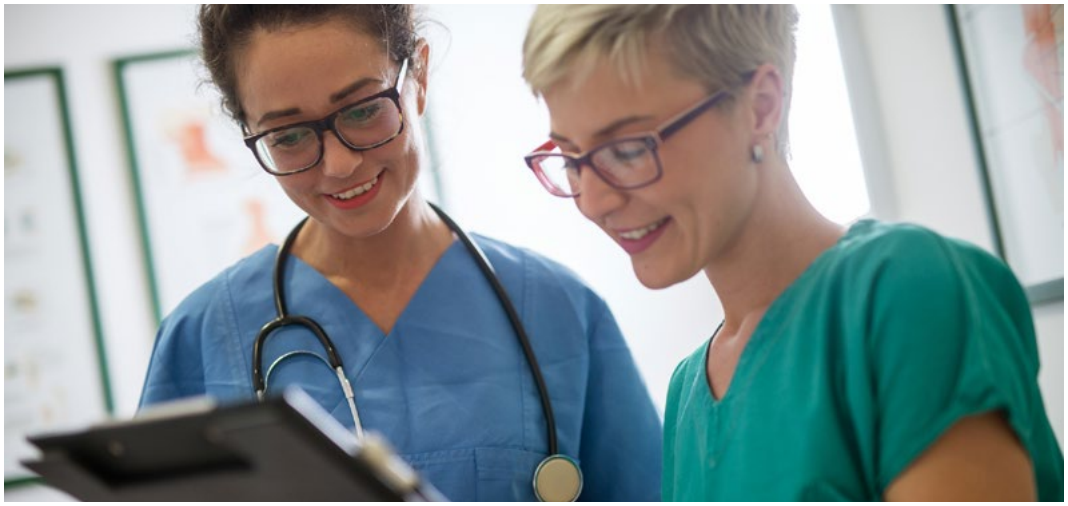
Within a comprehensive digital service, this can mean providing accurate information that is easily accessible and quick to reference. Beyond providing education, digital services can also be leveraged to deliver a greater range of support and behaviour change techniques. For example, instruction videos as a reference after receiving initial training, or planners and prompts for complex regimen management. It can also provide opportunities for people to learn how to build skills, such as resilience and managing difficult emotions, at a time and place that is convenient for them – enhancing the levels of care they receive.



Leveraging digital for face-to-face

This kind of remote engagement, where patients can access information without in-person support, is one part of patient support services that is evolving rapidly. However, digital has also facilitated improvements in the more traditional ways of providing support, such as access to HCPs and nurses.

While in-person support remains a core part of healthcare, digital solutions have allowed people living with health conditions to receive a quick response to questions or easily schedule an appointment with their nurse or HCP. By combining both digital and in-person, HCPs can dedicate more time to helping patients. "Pulling those two elements together is where we would suggest, and it's what the evidence shows, you're going to get a really impactful support service," says Dr Moloney.



This multi-platform approach is essential for guaranteeing comprehensive patient support as the relationship with nurses and HCPs is often one of the most valued elements of engagement. For Graves, the support provided by these systems allowed some of the pressure to be taken off healthcare systems during the early stages of the pandemic.

He spotlights the nurse teams and patient service providers here as offering an effective 'bridge' within healthcare, highlighting the value and potential of effective patient support services.

The next step of patient centricity

This demonstrated value has been established in the pharmaceutical industry in recent years, as the concept of patient-centricity has developed from buzzword to effective action. As a result, it is now increasingly common for companies to create in-house, patient-focused centres of excellence.

These in-house teams ensure that the treatments being developed have the future patient in mind and ensure that the brand strategy is established prior to launch. This can mean making sure that individuals living with the related condition have access to expedited diagnosis, receive the right treatment easily, and self-management and long-term adherence is optimised.

As the industry has moved to embed the concept of patient centricity into their operations, Dr Moloney explains that companies are thinking about patient support services earlier in drug development than ever before – this can mean as early as phase II. It has also seen the planning process change, where running clinical trials has moved beyond just determining the efficacy of a treatment to also be seen as an opportunity to "learn more around the individual's experience with that treatment," Dr Moloney states.

Providing support beyond the patient

One area where this is especially important is in treatments for rare diseases, which by definition means that few individuals are being treated and that their requirements may vary depending on a multitude of factors, including the individual's age, location and the care providers' needs. In this field, one size does not fit all, and patient support services have to be tailored in a careful manner.

As Dr Moloney explains, "Companies need to be thinking about being able to offer different support and different services to accommodate for different age ranges, considering both their trajectory through the disease, and the trajectory of growing up as somebody managing a chronic condition."

Due to this, Dr Moloney believes that there is an opportunity for the industry to provide support between the care that is offered as a paediatric patient and as an adult, as there can often be a number of challenges presented at this transition phase. There is also an opportunity to support the parents and carers who are helping a child to live with their rare disease (read IQVIA's latest blog). . The type of services that can be offered vary, whether that is helping them navigate the emotional challenge of managing their child's health, helping the adaptation process from parent to carer, or the fundamental challenge of delivering a treatment confidently.

Patient support services are usually designed around an evidence base for general health conditions, but insight and data can be limited for rare conditions. However, work can be concentrated on some of the common challenges for living with a rare disease, through input from nurse teams and design teams and learning from patient communities.

Dr Moloney notes that on a basic level, one important aspect of support should be to ensure individuals do not feel isolated, whether that is people living with a rare condition or a person living with a more common chronic health issue.

This has become more important than ever due to the pandemic. However, the evolution of patient services to continue to allow access to healthcare solutions, both digitally and in-person, has been invaluable for ensuring that people living with health conditions were able to retain access to support services.

The opportunity now is to understand which digital solutions have been shown to be most effective through this accelerated learning phase, and to build them into existing frameworks of patient support services and provide a more effective means for people to optimise their own health outcomes.

About IQVIA

IQVIA is a leading global provider of advanced analytics, technology solutions and clinical research services to the life sciences industry. Powered by the IQVIA CORE™, IQVIA delivers unique and actionable insights at the intersection of large-scale analytics, transformative technology and extensive domain expertise, as well as execution capabilities. Formed through the merger of IMS Health and Quintiles, IQVIA has approximately 68,000 employees worldwide.

Learn more at www.iqvia.com.

About the interviewees

Clare is responsible for oversight and strategic direction of patient, caregiver, and healthcare professional programmes that promote health-related behaviour change. Clare has more than 10 years of experience working and consulting as a health psychology specialist in multiple settings, including the University College London, Royal Free Hospital London. In addition, Clare has published work that examined the drivers of adherence in chronic disease, behaviour-change interventions and digital health support.

Clare has designed and implemented a multichannel, pharma-sponsored, patient-support programme that was launched across 23 countries, created a joint working initiative with NHS cardiac centres to offer additional post-discharge patient-support services, and provided oversight of a real-world study to determine effectiveness of telehealth devices in people with respiratory conditions.

Andy is product director for the patient engagement platform at IQVIA. Andy has over 10 years healthcare experience, both in agency and in provider (NHS). With a specialist focus in solution design for adherence and patient support solutions as well as leading product development in digital patient innovation, Andy represents a growing focus within IQVIA for the development of intelligent, impactful, next generation patient adherence and engagement solutions.

Advanced Clinical

Optimised clinical research through decentralised trials

Not only did the COVID-19 pandemic bring lockdown rules and increased safety protocols, it also led to delays, reconfigurations, limited patient access, and other restrictions for life science research and development. However, one benefit is that it accelerated innovations underway to solve long-standing clinical process issues.

> "The pandemic turbo-charged trial decentralisation," says Caroline Redeker, senior vice president, corporate development at Advanced Clinical. "We were already incorporating home visits, ePRO, and other decentralised components. But when the new coronavirus hit, we had to find new ways of working with trial sites since they couldn't see their patients in person, nor could we send our staff on-site to monitor."

Leveraging pandemic insights and digital progress

The pandemic forced trial innovation across the board. "It completely changed how our clients and the agencies would let us work," Redeker comments. "Instead of just for certain types of trials, we incorporated telemedicine and video broadly and increased other decentralised activities such as remote monitoring."

In parallel, the pandemic accelerated digital advances that were already underway.

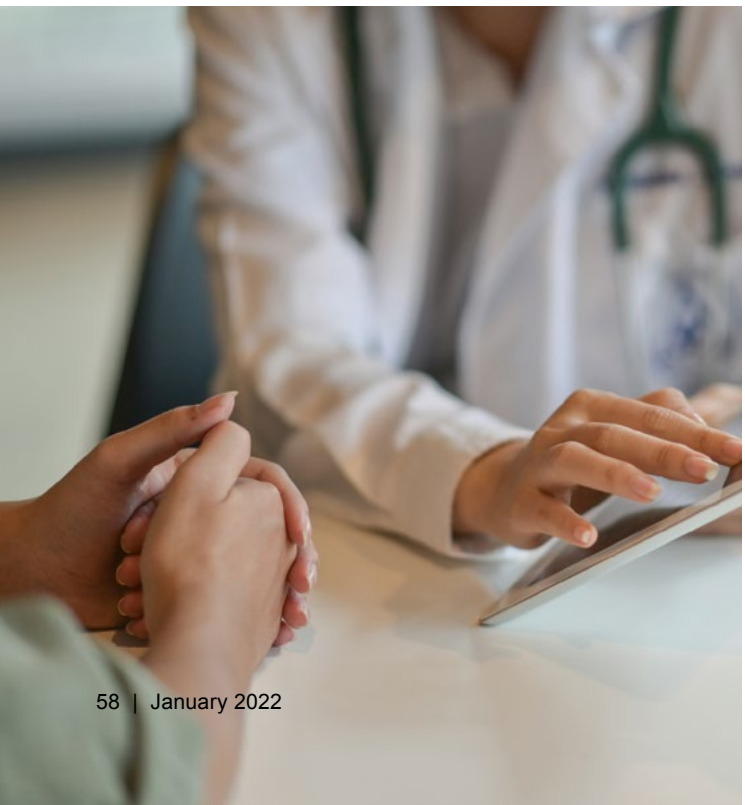
"It led to increased automation of the highly complex trial process, as well as improved access to information," explains Moulik Shah, vice president, digital health at Advanced Clinical.

Before COVID-19, a lot of information would typically be recorded and stored on paper or in many separate systems that were not integrated. With vast amounts of data accumulating over time, locating and retrieving the correct details at the right time became challenging.

"Clinical trials involve a large number of individual steps, many of which used to be covered manually until only a short while ago," states Shah. "Digitisation helps access and integrate data from a wide range of diverse sources in real-time. It brings tremendous efficiencies that drive trial decentralisation and clinical innovation."

Value generation through decentralised trials (DCTs)

Will these improvements prevail post pandemic? Why would the industry not revert to tried and tested ways that served them for decades?



"Decentralised trial components offer too many benefits all around," says Redeker. "You can't unlearn what you've learned."

The gained efficiencies, speed, and quality of results for trial sponsors are compelling. For patients, DCTs typically offer simpler more accessible, and convenient participation. For all, including healthcare providers, remote trial options generate data representative of real-world populations, resulting in targeted, personalised treatment opportunities.

"A lot of improvements will definitely stick," Redeker adds. "The industry is already benefiting from different ways of thinking. The pandemic taught us to embrace new approaches. For every future trial, people will explore improved ways of conducting them – how to optimise both our methods and how we interact with site staff, investigators, and patients."

"From a data perspective, we've seen a quality leap, too," adds Shah. When information gets digitised and seamlessly integrated, this eliminates faults like duplicative data entry or transcription errors between systems. "We're increasingly looking at a single source of truth."

Taking the trial to the patient

However, DCTs do not only mean technology improvements. "For certain types of trials, we want to bring the trial to the patient rather than requiring travel to centres for their visit," clarifies Redeker.

This can be achieved in diverse ways, such as leveraging mobile clinics, local pharmacies, or even targeting specific communities and groups. "A research structure may be set up around a patient's home or primary care physician environment, where they can participate remotely with a principal investigator (PI) based somewhere else."

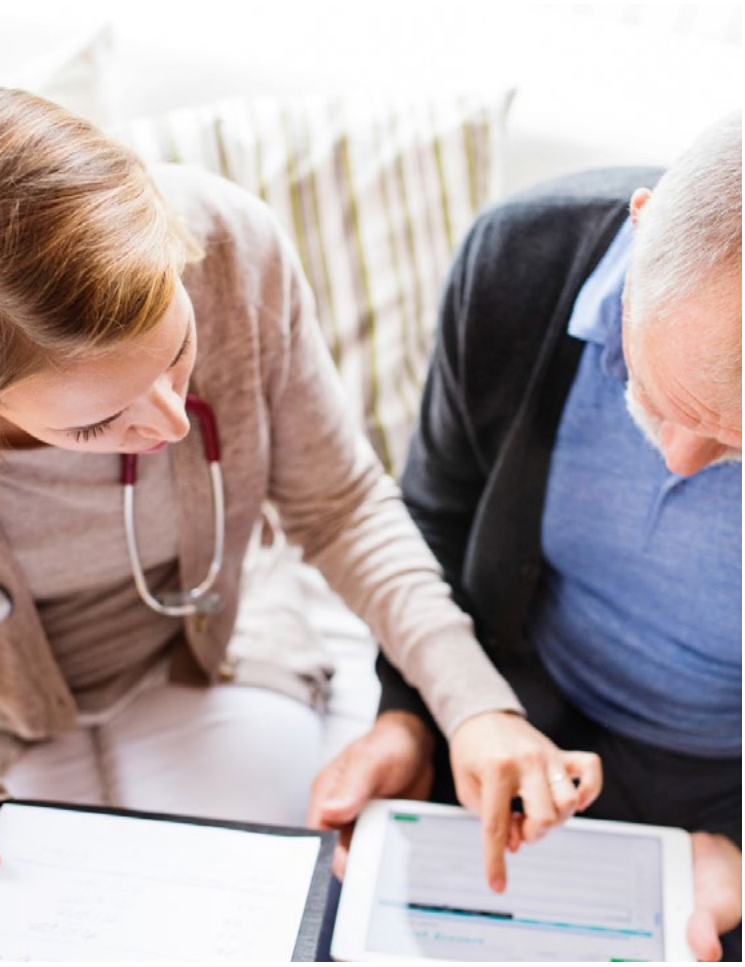
Shah agrees: "Before decentralisation, the average trial participant's journey was cumbersome. Many had to travel to distant sites, take time off work; often multiple times since visits would be scheduled around staff schedules rather than the patient's availability."

While DCTs can significantly improve the patient experience by enabling convenient participation, Shah explains, "They also help include patients from diverse backgrounds of relevance to a given disease or investigative treatment. This can strengthen submissions by representing real-world populations, also improving compliance and reducing attrition rates."

Hybrid trials – the new gold standard

How should trial sponsors leverage these insights to optimise their research strategy?

"Your digital strategy should mirror and serve your overall clinical strategy," guides Redeker. "Hybrid trials will be the gold standard for some time. Many aspects can be done remotely, and some fully decentralised trials are underway. But I don't think it's practical for the majority of studies to turn completely virtual; not in the near future."



There are, of course, acute conditions and patients who need to be seen by a specialist in the clinic. According to Redeker, "Even those cases usually contain digital or in-home follow-up components that can be incorporated to facilitate the research, like electronic patient-reported outcomes (ePRO), clinical outcome assessments (eCOA), or other aspects of hybrid trials."

Asked for types of research she would recommend DCTs for, Redeker lists chronic as well as rare diseases. "There are definitely chronic conditions where patients, sites and sponsors all benefit from efficient monitoring by wearables and other digital offerings, especially in later phase, registry, or quality of life studies collecting long term data."

"Yet there are rare disease patients, too, who need to travel far to see an expert PI based at a prestigious academic centre, for whom home health visits or other ways of monitoring and connecting between clinic visits may bring significant relief and open the patient pool."

Regulators enabling trial innovation

Regulators around the world have been open to how trials had to be adapted during the pandemic.

"It was great to see agencies accept a lot of the improvements we were making," comments Shah. "We've come a long way. Just a few years ago, a lot of data had to be collected in paper form and adoption of technology has been historically slow in our industry."

But things have changed since. "Today, we see the FDA and other agencies actively encourage the use of technology, for example, to enable greater diversity in trial populations. We value their openness to effective technology solutions and the productive collaboration with regulators across the globe."

"With that comes an expectation, however, that research providers prevent any compromise of data integrity, patient safety, or other violations of trial quality," Redeker explains.

Shah adds: "We also can't drive technology solutions too aggressively." The burden is shifting from patients going into a controlled setting to follow protocols, to patients leveraging a lot of smart technology at home.

The benefits though of this shift are intriguing. Technology facilitates accurate monitoring of patients' real life. How do they act outside the controlled clinical setting? What influences them to make decisions or change behaviours?

"We need to be certain patients and sites are ready to accept new technologies. There is a fine balance to strike," Shah explains. "That set of real-world information is critical to drive improved clinical outcomes."

The future of clinical research

Redeker and Shah envision the immediate future of clinical research to lie in tailored solutions to fit individual research programmes. "Our approach to DCTs is flexible, modular, and scalable, adapting to trial needs and therapeutic area norms," says Redeker. "Sponsors and CROs need to constantly deepen their understanding of new ways of working at both the site and patient level."

In addition to improved data integration and seamless flow through the clinical research environment, Shah expects automation will continue to replace yet more repetitive manual processes. “And with rapidly increasing data generation and processing capabilities, technologies like artificial intelligence and machine learning show significant potential to revolutionise clinical research.”

Another clear trend on the horizon is that new technologies customised to patients will boost precision medicine.

“Then we need to intensify the matching of clinical research to standard of care,” he continues. “Over the next years, trials will be optimised to a point where there’s no divergence. We will build clinical programmes on standard of care, not create separate conditions.”

Conclusion

Against these trends, how should pharmaceutical companies, device manufacturers and CROs best work together to create maximum value?

“There’s no one-size-fits-all in clinical research,” Redeker says. “Each trial presents unique needs. As a strategic partner, we aim to work with trial sponsors early on to fully understand the programme and match its needs to tailored solutions ideally before protocols are written.”

“Collaborating early strengthens the opportunity to integrate the most beneficial digital and DCT elements to enhance clinical development strategy,” adds Shah. These strategies should not run separately. “One doesn’t exist without the other.”

“For optimal clinical research efficiency, patient experience and journey, digital health expertise needs to be embedded in the entire drug and device development process and certainly should guide clinical trial design,” Shah concludes.

About the interviewees

Caroline Redeker, senior vice president, corporate development

Caroline Redeker, senior vice president, corporate development, has 30 years of experience in planning and managing pharmaceutical, biotech and medical device clinical research, creating successful partnerships with sponsor companies to add value to their programmes. Areas of specialty include clinical development and feasibility planning, site engagement and patient engagement strategies, decentralised trial approaches, and transition or rescue programmes.

Moulik Shah, vice president, digital health

Moulik Shah, MS, PMP, is vice president, digital health, at Advanced Clinical. Shah is primarily focused on identifying untapped opportunities to improve the patient journey, increase operational efficiencies and achieve cost savings in clinical trials – and on delivering these using innovative technological solutions.

Based on his broad experience in the avionics, telecommunications, power, medical device, and pharmaceutical sectors, Shah brings a unique perspective to digital health challenges. He has a BS and an MS in electrical and electronics engineering from the University of Illinois Chicago, and is the holder of two approved patents

About Advanced Clinical

Advanced Clinical

Advanced Clinical is a privately-held, single owner global clinical research services organization, providing full-service CRO, FSP and Strategic Resourcing solutions for biopharmaceutical and medical device organizations. Our company is committed to improving all lives touched by clinical research and we address the hopes of patients and healthcare professionals with industry-leading services and technology in life sciences. Visit our website to learn more about how we deliver a Better Clinical Experience: www.advancedclinical.com

Accelerating patient engagement in the digital health era

Understanding the person behind the patient is a crucial part of medicine, one that healthcare providers can use to improve the efficacy of treatments. At the 2021 Frontiers Health conference in Milan, Mark Duman and Paul Tunnah discuss the importance of co-creating with patients.

Over the past 50-years, demand for patient and public involvement in the development of new therapeutics has soared as patients grew more aware of and informed about their health. With their unique real-world insight into their healthcare experience, patients have a lot to offer when it comes to developing new treatments.

While patients may be willing and waiting to be included in the development of therapeutics, for many companies, this valuable asset remains an untapped opportunity. Unfortunately, this has created a deep divide between what patients need from new treatments and the products companies develop and market to them.

This divide was a key topic at the 2021 Frontiers Health conference in Milan, where MD Healthcare's chief patient officer Mark Duman and chief content officer & managing director UK Healthware Group, Paul Tunnah, showcased why healthcare companies should be working to engage the person behind the patient and incorporate their insight and experience to develop mutually beneficial treatments.

As Duman puts it, "trying to change healthcare's focus from what is the matter with you, to what matters to you".

View session

Critical components of patient engagement

Modern healthcare is complex. For patients, this complexity can increase the burden caused by the illness they are battling as they struggle to understand and access the proper treatment to address their needs.

"It's very easy to forget that patients are not a single homogenous group," says Tunnah. "There are all kinds of different patients from very health illiterate to very health literate and everything in between."

Under the old old-size-fits-all model of pharma development, companies would identify an unmet need, which would undergo molecular analysis before being released on the market. In this environment, patients did not enter the equation until the later stages of development.

"We need to understand where our biases are, and we need to adjust for them accordingly, both in trials and in delivery of medicines," explains Duman. "If you ask the average clinician in the UK what they know about the patients that they're dealing with, what do we sometimes know when we've collected data, is we'll know their past medical history, and we'll know their current medication."

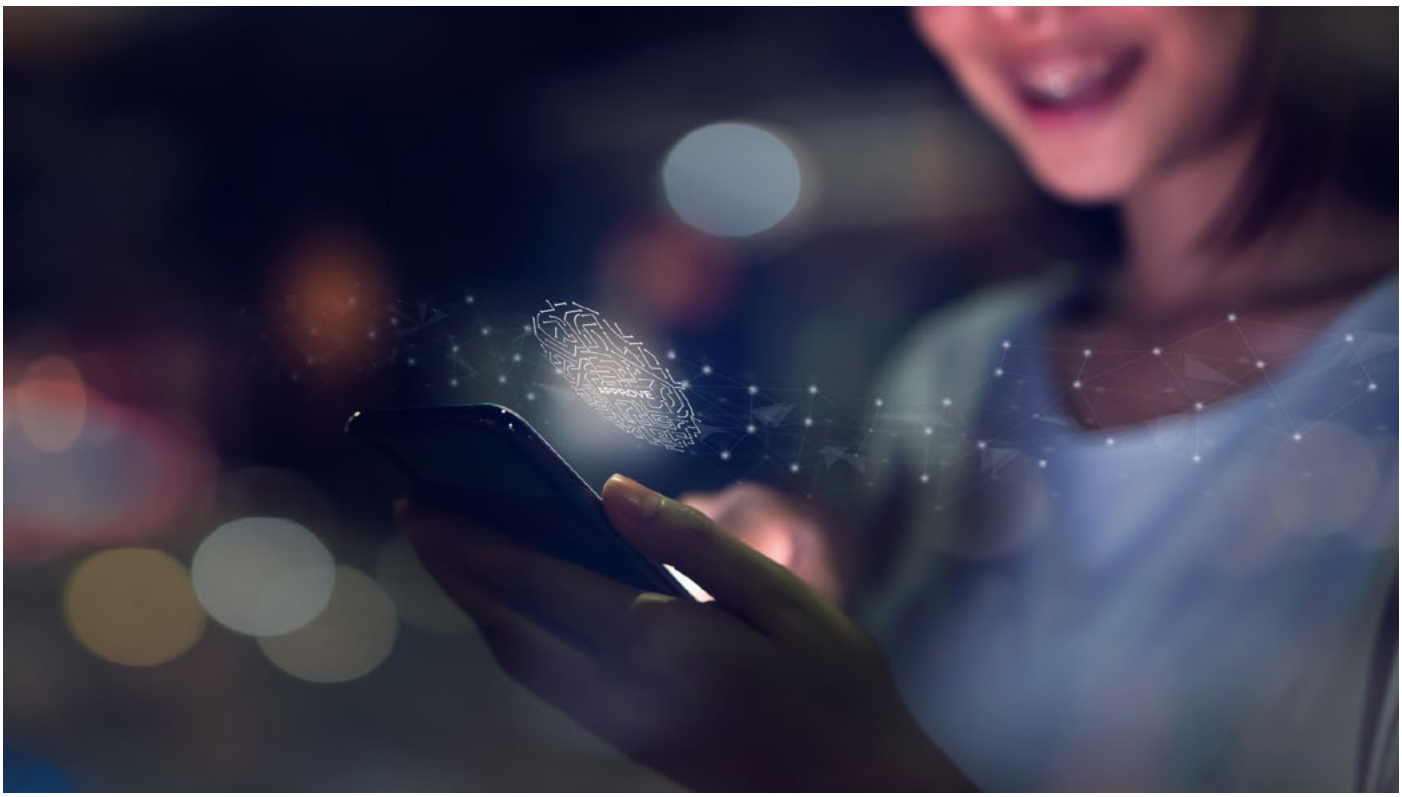
While this is essential information for the clinician, there are elements underneath this surface-level understanding that significantly affect the patient experience. Financial and living situations, for example, can impact adherence as a drug that must be refrigerated will be unsuitable for a person with no access to a fridge.

Listening, Duman emphasises, is the key to identifying these details.

"I think it's absolutely key for us to go out and listen to patient stories," he says. "Go and listen in your therapy area and other therapy areas. You will be amazed by some of the stories that you hear there."

By interacting and engaging patients on a personal level, clinicians can foster a more positive relationship, one where patients feel more valued and heard. But, for patient engagement efforts to be truly beneficial for both patients and healthcare providers, it is vital that any steps put in place do not come across as tokenistic. For Duman, this is where co-creation is key.

"Co-creation is really important across the entire value chain," he says. "Whether it's deciding you want a patient support programme, looking at surveys, post-marketing surveillance, or embracing digital health. We should really be co-creating these solutions with our patients and with our caregivers."



Unlocking the power of patients

Clinical development often takes place in a bubble, where clinicians focus on one specific area, which can ultimately result in a product that does little to address real patient needs.

"As a pharmacist, I spent many years thinking about X, where X was a medicine," says Duman. "What we sometimes fail to see is the other side of the spectrum."

The "we make X" mindset has facilitated an environment where patients are forced to compromise to suit a treatment rather than having a treatment that directly addresses the needs and concerns of patients. As a result, patients are less likely to adhere to medication schedules. This is a situation that benefits neither companies nor patients.

Working in partnership with patients can be highly advantageous when it comes to the costly and time-consuming task of developing new treatments. Patients are uniquely positioned to provide invaluable insight into how symptoms and treatments behave outside of the clinical setting. This real-world information cannot be created by research confined to a laboratory.

For Duman, this cultural shift towards collaboration where companies develop with patients instead of for them could also help to improve adherence, as including the end-used early on in the research process can help to prevent unforeseen issues later on in the development process.

"Insight and that co-creation are absolutely fundamental to the process," he says. "Not us sitting in our ivory towers deciding what the best thing is for our patients."

He spotlights insulin delivery as a notable example. Theoretically, prescribing multiple insulin injections addresses the symptoms that a patient may be experiencing. But, if you look at this from the patient perspective, repeatedly injecting yourself with a drug every day is a cumbersome and unpleasant experience.

"In the industry and digital health, we need to be thinking about the impact that medicines have," he explains. "Now we're beginning to understand why maybe 50% of patients don't take the medicines as prescribed."

Understanding this difference in perspective can help companies identify why patients are reluctant to engage with new digital platforms or products.

"It's because he, or she, wants to be a whole person," says Duman. "They don't want to be reminded that they are a patient on a daily basis."

"We need to think about patient innovators and patient innovation," he continues. "Stop defining the healthcare system by clinical unmet need. It needs to come from quality-of-life and patients' unmet need."

Walking the walk of patient engagement

Transitioning to this new model of engagement will not happen overnight. However, to truly enact meaningful change, companies must first take stock of their current levels of engagement across all aspects of the business.

"It's a 360-degree view based on internal and external," says Tunnah. "Not just the people whose job it is to do patient engagement, but everybody."

Understanding areas of opportunity for patient engagement is a critical step in the process. Through their work as consultants, both Duman and Tunnah have first-hand experience of how a robust reflection process can help to inform future engagement strategies that benefit both companies and patients.

"Every company is well-intentioned with patient engagement, says Tunnah. "I think the bottom line is there is a gap between a good medicine or a good device and a good outcome. That gap is driven by what's going on with the patient. What you don't understand about the patient can really hurt you."

As with patients, viewing the company as a whole entity opens up new avenues for engagement that previously may have been lost in a fragmented and siloed engagement model. Not only can this open up channels for collaboration between departments, but it also ensures that patients receive consistent information by reducing the risk of confusion.

As Duman explains, "If we don't have the same definitions, if your patient engagement is different from my definition of patient engagement, then no matter what we do, we're not really going to come to common ground."

Amid a wave of digital transformation across healthcare, healthcare providers have unprecedented access to patients. It is a prime opportunity to drive a more collaborative patient experience, one where patients are not just seen but truly heard.

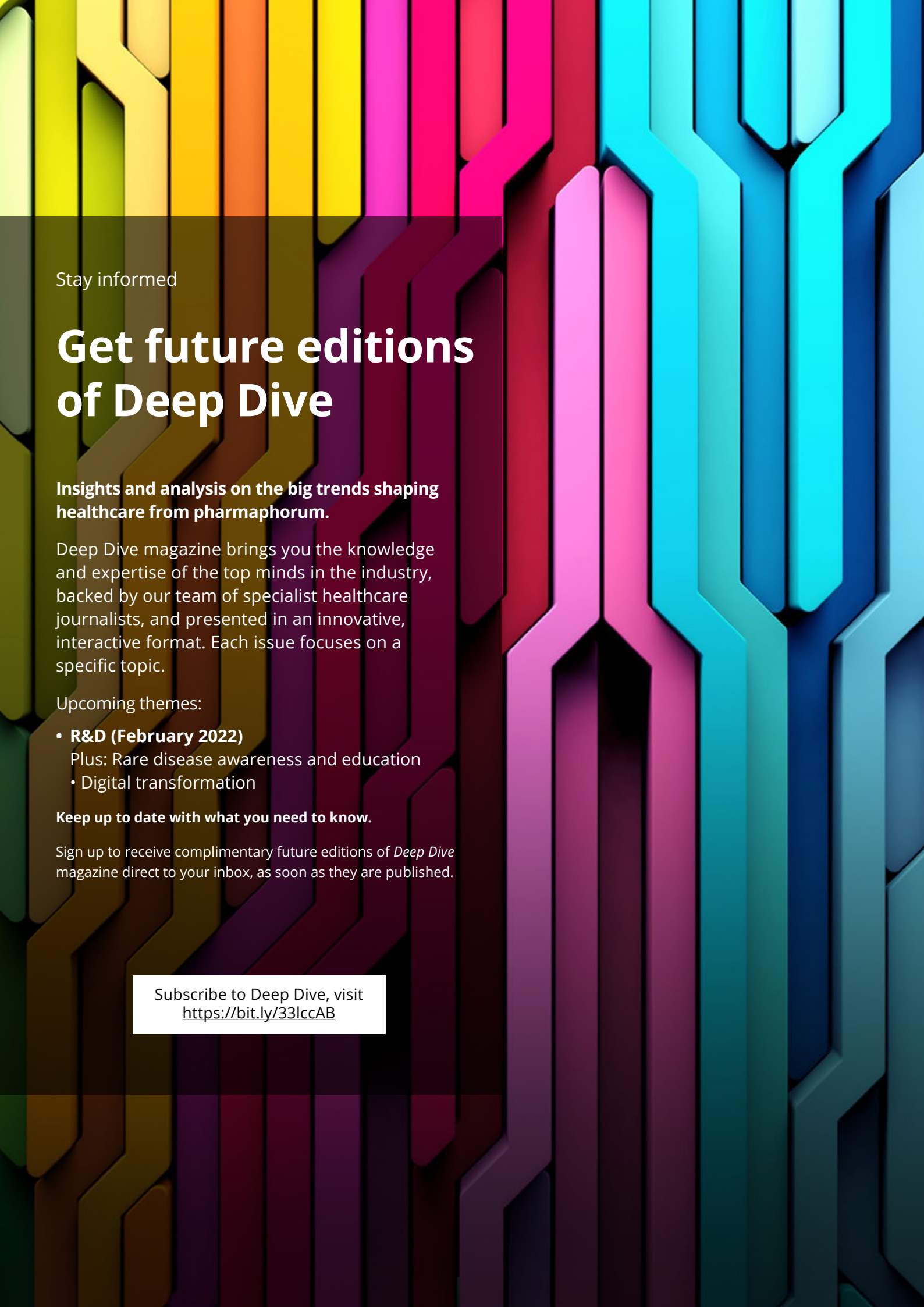
"If we were to give patients information, education and methods to self-care, then we're beginning to see a system that hopefully enables them to look after themselves as opposed to relying on the system," concludes Duman. "That means us positioning information as a therapy, not as a nice to have, but as a must-have, that is integrated into healthcare delivery.

About the interviewees

Mark Duman MRPharmS brings over 30 years of clinician, management consultant and patient perspectives to the healthcare, life sciences and digital health sectors.

As the Chief Patient Officer for MD Healthcare, he works with organisations such as AstraZeneca, Diabetes UK, Google Health, JnJ, Macmillan Cancer Support, Microsoft, the NHS, Pfizer, Novartis & Siemens Healthineers to harness digital health, develop markets and improve patient engagement. In short, to make healthcare more person-centric. mark.duman@mdhealthcare.co.uk

Dr Paul Tunnah is chief content officer and UK managing director for Healthware Group. Prior to this, he founded pharmaphorum in 2009, which was acquired by Healthware Group in June 2020. He is a recognised author, speaker and industry advisor with a passion for helping organisations tell authentic stories that resonate, co-create solutions and unlock the power of digital and social media in connecting with customers and understanding markets. Dr Tunnah holds a BA in Biochemistry and DPhil in Biological Sciences from Oxford University.



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Contacts

Editorial team
Eloise McLennan
editorial@pharmaphorum.com

Sales team
Samuel Peploe-Williams
advertising@pharmaphorum.com

Design
Mike Hammerton
Mike Smith

A pharmaphorum media publication

www.pharmaphorum.com

pharmaphorum media ltd, Third Floor, Rosemount House, Rosemount Avenue, West Byfleet, Surrey KT14 6LB, UK
Tel: +44 (0)1932 339 264